MAY 28 1943
...itectural
Library

5 houses

Richard J. Neutra	Palos Verdes, California	Prefabricated steel construction of a type which may very well become a pattern for postwar construction	An extremely livable, almost romantic house
George Fred Keck	Lake Forest, Illinois	Low-cost house of wood construction, heated partly by the sun and partly by warm air ducts under the floor	Not only an experiment in developing new heating methods; also a free and open treatment in design
Harwell Hamilton Harris	La Jolla, California	House for an oceanographer who believes in living [illegible]	[illegible]ul Bromberg designed the interiors
Milliken and Bevin	[illegible]	Nearest city is 50 miles away; owner commuted to an eastern metropolis by airplane; high winds and fire hazard determined the design	Heat, light, and power all generated at home
Gardner A. Dailey	Marin County, California	This is one of the best houses we've ever seen; unpretentious, honestly conceived, superbly executed	Intimate, truly a home
Eleanor Pepper and George Kosmak	Princeton, New Jersey	The owner wanted a high-ceilinged house that would be modern yet fit into conservative surroundings	Typical clapboards, etc., but unmistakably modern
Selected Details: Ernst Payer	Morristown, New Jersey	Economical, rational design on a modular basis does not, of course, preclude good contemporary design	

NEW PENCIL POINTS

LOOKING AHEAD—

THE STORE FRONT OF THE FUTURE is very much the business of The Kawneer Company. Having originated the store front idea back in 1905, and having pioneered many important store front developments, Kawneer is now working on the better Kawneer Store Fronts of tomorrow.

The recent Kawneer-New Pencil Points Architectural Competition revealed interesting new trends; other research is pointing the way to improvements of great importance. Kawneer production facilities, now devoted 100% to the war effort, will again be directed to the manufacture of superior store front construction.

STORE FRONTS OF TOMORROW NEW PENCIL POINTS-KAWNEER 1943 COMPETITION

Kawneer ORIGINATORS OF THE

RUSTLESS METAL STORE FRONT

AND ALL-ALUMINUM RESIDENTIAL WINDOW

New Pencil Points, May, 1943

5

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Next Month:

Douglas Haskell, critical observer of the American architectural scene, calls his article "They Never Spoke Latin." In it he traces roots of North American architecture which antedate the arrival here of white men, and offers examples which show how common to an earlier culture than ours were many developments which we now blithely hail as new.

KENNETH REID, Editor; FRANK G. LOPEZ, Managing Editor; DON GRAF, Technical Editor; ALFRED E. GALL, Associate Editor; BERNARD RUDOFSKY, Associate Editor; MIRIAM WHITE, HELEN C. WILLS, Editorial Assistants; MAURICE GAUTHIER, LEAF LEWIS, Drafting; PHILIP H. HUBBARD, Publishing Director; JOHN C. BELCHER, Advertising Manager; JOHN ZELLNER, Circulation Manager. Cover design, layout, and typography are by RUDOFSKY.

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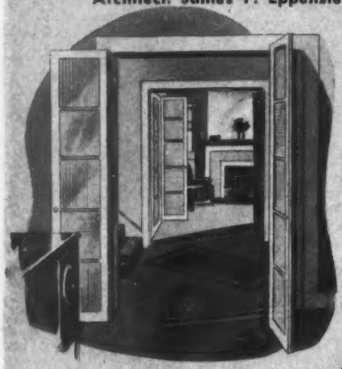
Smart, Thrifty, Useful IDEAS with *Decorative Glass*

This smart office reception room is glazed with Louvrex, providing high light transmission and office privacy. Architect: James F. Eppenstein. Hedrich-Blessing photo.



Decorative glass doors increase light for home interiors, and add a pleasing note to barren archways.

Adding to the intimate atmosphere of the living room fireplace, these twin side windows are glazed with Decorative Blue Ridge Glass to soften natural daylight.

In wartime, smart, thrifty, useful ideas are welcomed by business people and homeowners alike as an aid to morale. Simply and inexpensively, the ingenious Architect and Contractor can supply these ideas with the help of Blue Ridge Decorative Glass.

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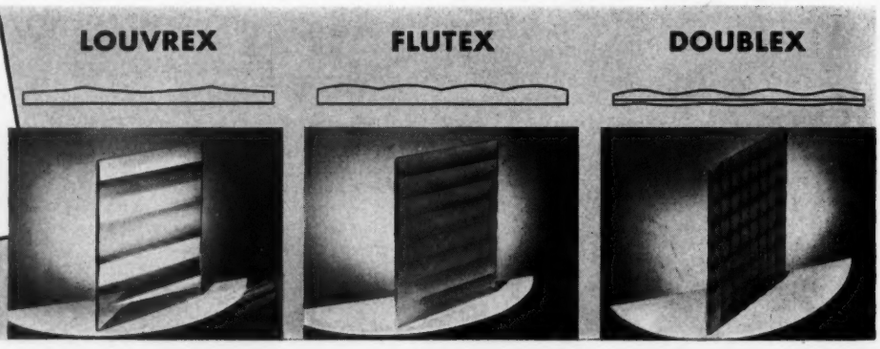

THESE ARE TIMES THAT PROVE THE WORTH OF GOOD MATERIALS

Because of copper and brass, his ship is safer for him, more deadly for his enemies . . . all the way from its copper-built radio system to the copper-banded shells its big guns fire.

She also enjoys added security at home, thanks to copper and brass . . . brass-pipe plumbing . . . copper sheet-metal work . . . all the many places where durable copper and brass mean long-lasting, rust-free, trouble-free service.

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NEW PENCIL POINTS

---invaluable, challenging, imaginative, really oriented, the best magazine up to date

Herewith we print a few of the reactions of our readers to New Pencil Points. *The letters are unedited except that we have, in two or three cases, omitted portions which contained no criticism. Because those whose beliefs run counter to ours usually wrote more at length, there are eight letters* contra *as against eleven* pro; *otherwise the selection has been as impartial as we, who remain editors and hence interested parties, could achieve.*

For all the host of correspondents who have thus expressed their active interest in Pencil Points, New *or old, we are extremely grateful. We will try to profit by the advice which has been offered, in most cases, in so friendly a manner. And not the least of our thanks is due for the fact here so well demonstrated: That, even in time of war and in a mechanistic age, personal feelings are still expressed.*—The Editors.

Editor:
Congratulations on the *new* Pencil Points. Layout and policy cannot be separated, and on both counts I feel that you are really oriented. I trust—and feel—that you will remain so.

Morris Sanders, Architect
Chief, Product Development, OPA

Editor:
I want to thank you for the very excellent presentation in the January number of the New Pencil Points. I was most impressed by the attractive cover and general layout of the magazine. It was only with the publication of the book, "Brazil Builds," assisted by Miss Elizabeth Mock who has done special work for The Museum of Modern Art in the past, that I realized how important such layout is. The modern layouts in particular are really works of art, and I feel that your article on louvers, featuring the Yacht Club at Belo Horizonte, is a fine example of this sort of work.

Philip L. Goodwin, AIA
New York

Editor:
I have just read a copy of the January New Pencil Points and wish to congratulate you on an exceedingly interesting and valuable issue.

We are naturally gratified by the excellent report by Mr. Lescaze on our Region II Conference held in New York City early in December, but are also intrigued by the challenging material in the rest of the issue.

Hugh R. Pomeroy, Director
National Association of Housing Officials, Chicago

Editor:
I have just finished reading the current (January 1943) copy of New Pencil Points and don't ever remember reading anything that has thrilled me as much. The articles by Charles M. A. Stine and F. J. Van Antwerpen are most amazing in their presentation and content.

Mechanical science and chemistry will certainly have a commanding effect upon the future of our cities and the techniques we use for planning them.

H. Evert Kincaid
Acting Executive Director, Chicago Plan Commission

Editor:
My compliments on the January issue of your magazine. Keep up the good work. There is a big job ahead, but if we do not prepare for it now we will not be able to win the peace.

H. Eidmann, Draftsman
Grand Gorge, N. Y.

Editor:
I don't want it to go to your head; but I do think you and your associates should be sincerely and strongly congratulated for the handsome issue No. 2 of New Pencil Points.

I took particularly great pleasure in seeing what had been done with the presentation of the report of the Kawneer Competition *(see February issue—Editor)* since I had a small part in it. I thought the presentation was excellent, attractive, and interesting. The introduction of red for some of the comments seems to me a good idea, and the introduction of the amusing sketches by Witold Gordon and others a very intelligent thing to do. In addition, the stores actually carried out, of which you offered illustrations, are very pertinent and good material—and it was swell to time them with the competition.

At a time when saving paper is obviously uppermost in your mind I congratulate you for having found an economical small print which is clean and very legible.

I am not sure I should go on writing to you any more. I expect great things from Pencil Points. I think the start made with Numbers 1 and 2 entitles many of us to hope that you will continue in the direction now taken.

William Lescaze, AIA
New York

Editor:
Congratulations on the last Pencil Points. I have heard many flattering remarks about it and add mine to the chorus.

Hervey Parke Clark, AIA
San Francisco

Editor:
You and your staff are to be congratulated on your March issue of New Pencil Points. It will be an invaluable aid to all planners.

S. Clements Horsley, President
Horsley Co., Inc., New York

Editor:
You have convinced me that Pencil Points has become what many of us have been hoping for—a progressive magazine, needed to help a low-ebb architecture back to its feet. Perhaps, very largely through your guiding efforts, architects will once more become conscious of their possibilities and responsibilities. We would have a new architecture without your help, but not so soon, nor of such quality.

Chester E. Nagel, AIA
Austin, Texas

Editor:
I have been a subscriber to Pencil Points ever since it was first published. And as I have taken all of the Pencil Points, I believe I am qualified to state that the idea behind your last issue gives us the best magazine up to date. I like the idea of devoting the principal part of the issue to one type of building. It doesn't make it nearly so difficult to go back and find the things which were interesting to you and, naturally, of some value. Added to that I feel that you can go into each problem more thoroughly.

Charles Atfillisch, AIA
Decorah, Iowa

Editor:
Permit to commend you for the excellent new format of your magazine, which places you in the forefront of contemporary publication design. It is imaginative yet completely industrial, a rare achievement.

Theodore Jung, Draftsman
Washington, D. C.

---left wing, salon angle shots and other junk, all arranged in a stupid manner

Editor:
I think you had better cancel my subscription to the NEW PENCIL POINTS. Your ideas about what is fit to publish are so different from mine that I fear I am not going to get much inspiration.

Of course, I realize that there must be a dearth of material in these days, but it can't be as bad as Issue 1, January, 1943 would indicate. The cover might be a picture of the Solomon Islands, or an ant hill; the feature inside illustrates a spiral staircase which is not particularly handsome; then there is something about concrete which everybody knows is not an architectural material at all, but is fit only for footings below ground. The story about wood is on the intellectual level of a Boy Scout magazine where one might expect to find all about how to make camp articles out of wood when suitable materials could not be had.

I will return January issue if you can use it.

LAWRENCE WOLFE, FAIA, Architect
Arlington, Va.

Editor:
Years ago the magazine was especially well adapted for the everyday draftsman and a lot of details and subjects could be obtained from your magazine, such as small homes and details therein. Today, a lot of uninteresting subjects such as large projects on war work and unsightly modernistic homes beyond anyone's reach can be found in your publication.

After conferring with some daftsmen and architectural men in my profession, all agree on the same criticism. We hope that some day soon you may give us a publication which will be on the same instructive lines as your publications were when you first started.

Small homes from $5,000 to $10,000 are going to be in demand and the architect is going to be back in his place where he should be, instead of the general contractor. . . . The modernistic home is no home and is not architecture.

W. F. VAN EYK, Draftsman
Ridgewood, N. J.

Editor:
In looking over the NEW PENCIL POINTS it seems to me that it has suffered terribly in its transition. The *new* part is all right, but where has the PENCIL POINTS gone? To make it brief, where are the items that made PENCIL POINTS what it is, or was, that made it the one magazine that could not be found in a second-hand book store?

I have read PENCIL POINTS for fifteen years and have been a subscriber for nearly ten, and have copies that I have kept for that long. Of all the recent issues I doubt if there are two that are worth filing away today, and there is not one that would be worth more than scrap paper five years from now.

Remember: *Monographs,* pictures and measured drawings that were worth while; *Comparative Details,* valuable to the draftsman as well as the architect; *Data Sheets,* really gave us something that we all wanted—reference, complete, in one place; *Renderings* that really were something more than a photograph; but—. How about it, Mr. Editor, why not try to put PENCIL POINTS back on its feet where it will be of some value? Right now it's a meal ticket to a flock of photographers. Why not let them put their salon angle shots in *Popular Photography* (pages 53, 56, 57, 60 of the February issue show a few examples of terrible angles and beautiful distortion from the view point of a photographer) and give PENCIL POINTS back to the draftsman? Or is it just me?

LESTER THOM, Specification Writer
Tuckahoe, N. J.

Editor:
The present make-up and material in PENCIL POINTS does not interest me any more. At one time it used to be a good magazine but now there is not much useful "meat" in it.

C. A. HERMAN, Draftsman
Madison, Wis.

Editor:
Somewhat too much "man-bites-dog" idea for me and several others who see my copy. After all there are more men bitten by dogs. They deserve first aid from somebody. Meaning mixture of format, newspaper approach, and plenty left wing. It may be that these things pay, but be sure.

A. H. ALBERTSON, Architect
Seattle, Wash.

Editor:
I do not like your *new* PENCIL POINTS a bit. It is following in the footsteps of the *Forum,* which I have stopped subscription on, and the *Record* is about as bad. The idea seems to be to have a magazine all advertising with just a few columns between of junk like Frank Lloyd Wright's and his imitators.

Do all subscribers have such rotten taste that you must print only that stuff, and do people really want to live in such monstrous, skewed off, cockeyed waste of good building material and call them homes? Other architects I have talked to feel the same about that and the NEW PENCIL POINTS.

For the old way which was fine, I thank you.

BOYLE IRWIN, Architect
Pottstown, Pa.

The drastic change in the policy of your magazine in eliminating architecture from the pages and substituting a lot of stuff that I do not understand or appreciate has left me absolutely cold about renewing my subscription.

Architecture is still being done by a few intelligent men in this country. The stuff that is being published is an outward and visual expression of the total lack of the expenditure of logical, sane, and intelligent thought on the design of buildings.

Those "architects" whose work is being published are doing things that no one could possibly be proud of in the years to come. I could and would subscribe to a real architectural magazine but yours is most certainly not one.

J. A. PARKS, Architect
Washington, D. C.

I return the enclosed bill for a trial subscription of the NEW PENCIL POINTS. I am returning to you the first copy of your new magazine in its original mailing envelope. I am asking you to cancel my subscription to the magazine.

My reason for canceling my subscription is just that I do not like the NEW PENCIL POINTS. Frankly, there is nothing about it which offers the slightest help or interest to me in my work as an architect.

Back in the old days, PENCIL POINTS was a dandy little magazine. There were interesting articles on rendering and sketching techniques, interesting and valuable plates, color reproductions, White Pine Series, scale details, Don Graf, and all sorts of nice things that you couldn't find anywhere else. And things that you filed away for reference.

But now,—what do you offer? A laughable array of adolescent scrawls, obsolete "modern" photographs, all arranged in a stupid manner.

I'm sorry I can't approve your new magazine because it probably represents a lot of effort on the part of somebody—but that's the way I feel about it. May you get enough kicks to shift you back into doing the kind of a job that you used to do, and that remains to be done right now.

HENRY SCHRAUB KELLY, Architect
Hamden, Conn.

THE steady roar of naval guns . . .

Protecting convoys of men and supplies . . .

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American Industry is rapidly stepping up mass production of these vital weapons of war. Supplying guns ahead of schedule.

To keep war plants working at maximum speeds, the very finest of heating equipment is required . . . for proper heat means increased production.

For fifty years, steam has served America in peace and war, the one indispensable heating medium.

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Readers say . . . . . .

Public Relations Needed

I read your editorial in the April issue of NEW PENCIL POINTS with considerable interest. It certainly is pitiful that the whole architectural profession does not seem to feel that it can afford to support an adequate program to maintain its own existence. Actually, instead of one able public relations officer, or whatever you choose to call him, working out of the Washington office, we need one in every single city of any decent size. We must keep plugging on this angle.

In a business as big as the building business, there is a great deal of money to be made and some people are going to make it. Unfortunately there are so many competing agencies that the architect is being squeezed out. This does not need to be. If the profession is adequately represented by competent persons it can and will prosper.

ROYAL BARRY WILLS, Architect
Boston

Continue the NRPB

Your editorial on the National Resources Planning Board *(page 14, March issue—Editor)* shows that you can be and should be a powerful influence in the future planning of our country's needs. The curtailment of funds for this agency is the direct antithesis of all the country's efforts for planning for the future.

All planning has been torn to shreds by the supposed representatives of the people. Such a needful agency as the NRPB, engaged in important postwar studies, is being sabotaged under the shallow pretext of economy.

The question is, economy of what? Is it economical to create chaotic conditions by non-planning which brought on the depression of 1930-1933; or if a few misguide the people for their selfish interests and leave the rest of the country and the American well-being to shift for itself in the name of "rugged individualism"; is it economical (as technical men) to do anything without a planned, specified thought?

Your editorial creates that needed leadership to awaken the architects and engineers to the exigencies and grave situation confronting the well-being of our country. I urge you to elaborate on this thought and to contact architectural and engineering societies and the unions (both C.I.O. and the A.F.L.) to join in this action for it concerns all the country; and the various technical and trade magazines to publicize the need for a NRPB.

WILLIAM J. MODIN, Architect
New York

NRPB Necessary

It is gratifying to see NEW PENCIL POINTS, in the March issue, wield the cudgel for a continuation of the National Reesources Planning Board. The vicious action of the House Appropriations Committee in refusing to assign a single dollar for the Board to continue with its postwar studies is a blow to democracy in general and to technical men in particular.

Readers should ask themselves, "How will this affect me?" Shall laxity be responsible for a failure to plan similar to that after the last war which resulted in chaos? We are engaged in a war for survival, the result of which we desire to be a world economically and socially sound.

The individual benefits if attention is paid to the well-being of society as a whole. The man who wraps himself up in his own ego and doesn't consider the welfare of his less fortunate neighbors isn't worthy of citizenship in a democracy. Democratic citizenship requires active, informed participation in the betterment of one's self and community. Technical men should heed these remarks.

Resolutions should be proposed on the floor of architectural, engineering, and professional societies. The question should also be raised in trade unions and civic associations by those affiliated in this manner. Business men lobby for minority interests. We should be proud to press for the interests of the American people.

We must inform legislators, newspapers, and periodicals of our desires and, in no uncertain terms, convince them that the continuation of the NRPB is essential. If we do not speak our minds to indicate our earnest desire for a realization of the aims for which we wage a war, only we are to be held accountable.

The American people have a high standard of living only because they have fought every inch of the way for it. Let us not be wayward in our duty.

ROBERT LIPPIN
New York

"QUOTES"

Postwar New Orleans

EMILIO LEVY, *New Orleans architect, in an interview printed in the New Orleans* TIMES-PICAYUNE *recently, asserted that city rehabilitation in New Orleans had been retarded while other cities had made rapid advancements. He urged officials to undertake a postwar building program to remove obsolete structures in the city. Printed below are some excerpts from the interview.*

New Orleans has many requirements needed for beautiful and progressive development. It has concentric streets instead of the usual checkerboard pattern. It has wide avenues bordered by magnificent trees. It has grown normally in all directions. However, it is overspread for its population; as a result there are numerous dilapidated areas.

The practice of subdividing land at the perimeter of the city before it is ripe for development has the effect of attracting families to new houses from established neighborhoods in the city proper; this creates serious civic problems such as undue extension of public utilities, streets, etc. at the expense of the proper maintenance of the city itself. Adjoining the main streets or avenues it is appalling to find many blighted areas,

(Continued on page 10)

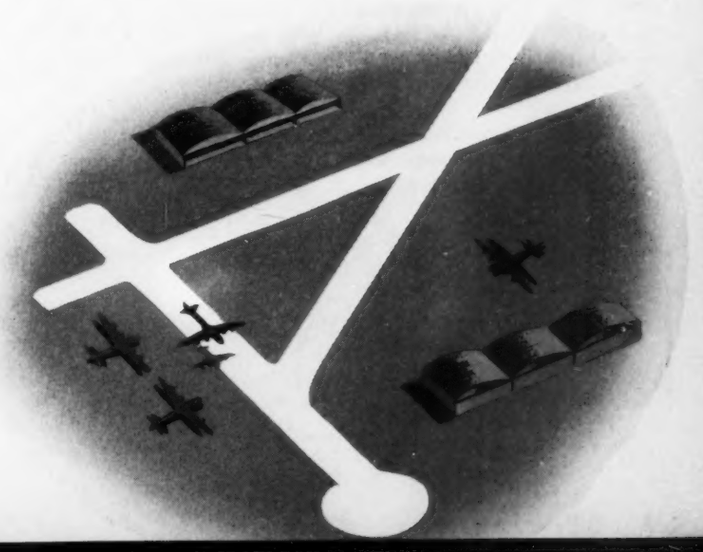
Firm Footing

FOR FLYING FORTRESSES

Coming into port! The crushing weight of these giant airships offers a strenuous test of strength to the runway under foot and challenges the endurance of an airfield's concrete flooring. Long before Pearl Harbor the Raymond Concrete Pile Company was conscripted to construct sturdy underpinning for the broad, level pathways that lead to the sky. Our air bases must not be too few, too late or too weak!

Assuring firm footing for flying fortresses is but one step in the all-out effort to win this war. Raymond men and Raymond equipment are helping to make the country strong in other fields too —laying firm foundations for important military, naval and production projects. For this is a race against time, a contest in which we are all entered and which we must win together. Speed!

THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.



RAYMOND

CONCRETE PILE COMPANY

140 CEDAR STREET, NEW YORK, N. Y.

Branch Offices in Principal Cities

(Continued from page 8)

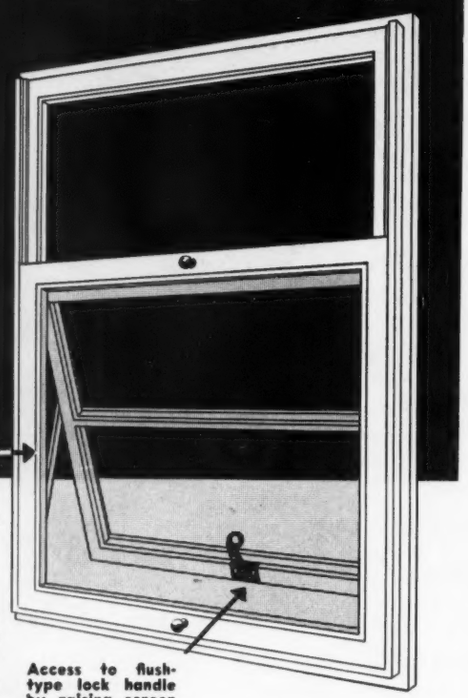
increasing at a very rapid rate. Piecemeal housing projects, no matter how good they are, cannot effectively prevent this creeping menace. Once this house erosion starts it is difficult to stop. Private individuals alone are powerless to combat this disease; our state government must step in to pursue a wise public policy.

Local, state, and federal government should today plan for postwar construction with a long-range program for the rehabilitation of obsolescent areas. There are some very fine monumental buildings scattered about the city but they are placed in squalid surroundings and not with a definite master plan in mind. Planning without intelligence is of no avail, and intelligence without planning is worthless.

For postwar construction, besides hospitals, schools, and clinics, we should plan a civic center with a modern theater and concert hall; a state museum, fountains, etc., and in a city which attracts such a host of visitors we certainly should include a Union Station. Improvements such as these, together with the unique beauty of our local architecture, would make New Orleans the most attractive city in the United States.

Now available with

SCREEN and STORM SASH

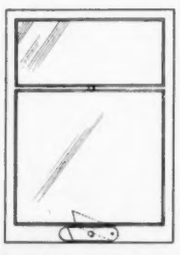


Screen and storm sash are interchangeable; snap in place; held by spring tension.

FOR STANDARD 2 x 4 FRAME, THIN WALL OR MASONRY CONSTRUCTION

Units are completely assembled. No fitting is necessary on the job. Sash and frame are of white pine, toxic-treated with water repellent "Woodlife." Windows are set right in studding, requiring no frames, sash weights or balances. Flush-type lock handle is an exclusive design feature. Standard sizes: 2 to 4 lights wide by 2 to 4 lights high. (1'-11½" to 3'-3½" wide by 2'-5⅞" to 4'-7⅞" high.) Units can be glazed with standard size lights. The Pella Awning Window complies with Federal Housing Authority Specifications. Sizes readapted to your specifications if quantities warrant.

Access to flush-type lock handle by raising screen or through storm sash ventilator.



Inside storm sash easily removed for extra ventilation and window washing.

Rush your request for FREE, full size details to the Rolscreen Company, Dept. 153, Pella, Iowa

Pella

AWNING-TYPE WINDOWS

Made by makers of Pella Rolscreens, Venetian Blinds, Casement Units

"Non-Expert . . ."

In an address, "The Non-Expert Looks at Public Housing," at the NAHO conference in Chicago, E. D. Hollinshead, Manager, Real Estate Division, Carnegie-Illinois Steel Corp., made a strong appeal for greater cooperation between private industry and public housing officials. He proposed the following eight-point program for the development of a housing program:

Elimination of substandard housing; replanning and rezoning of urban areas; plans for a determined postwar effort by public housing authorities, planning commissions, local governmental units, and private units; proposal of new building methods; re-align trade practices and building codes; cutting of building costs and devising more favorable financial plans with respect to home ownership; that the public housing authorities' plans be not only for the sub-marginal worker but also for the skilled laborer and the white collar worker; that there be a definite plan for cooperation between public housing authorities and private industry.

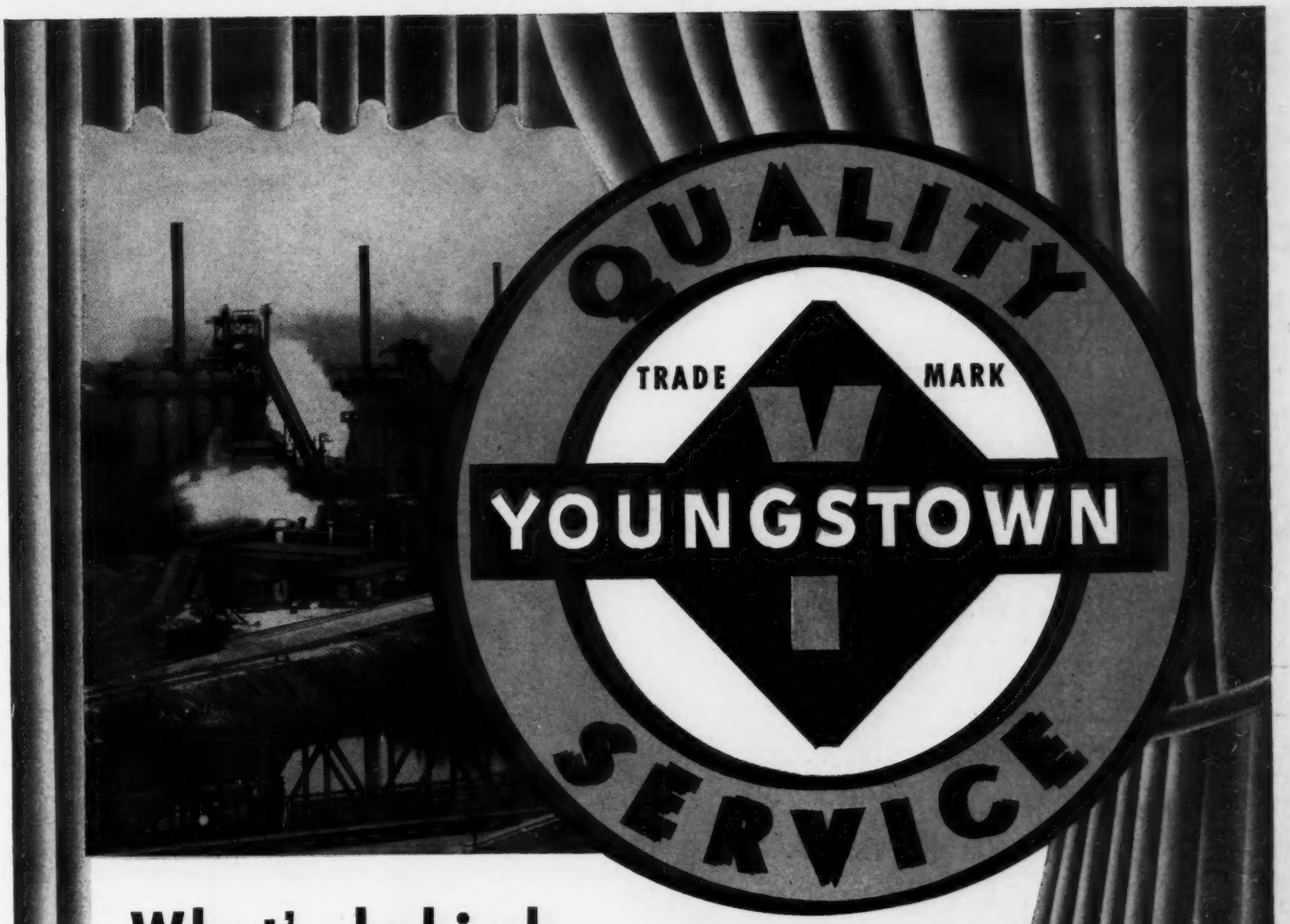
Planning Affects Everyone

The following principles were embraced in a communication presented by Commissioner Emerson Knight, Landscape Architect, at a recent meeting of the San Francisco Art Commission. It stresses the need of steadily thinking on the general and cultural welfare of a city for peace-time realization. This, points out Joseph H. Dyer, Jr., secretary of the Commission, can only be achieved through sound planning and close cooperation between all civic commissions and bodies concerned.

The restoration period following our present war will surely include development of new housing on a vast scale. Plans of such housing should be soundly related to our city plan and prepared in advance. New building schemes should consider not alone practical needs, but also those insuring health. Beauty in design, form, and color should be appreciated, and emphasized. We can strengthen the integrity of our citizens when each family is assured separate living quarters under one roof, with ample space environment. There must be air, light, and sun; also trees, shrubs, grass, and flowers. Thus, in revising our building and zoning ordinances, we urge and insist upon minimum city lots large enough to meet these requirements.

We resolve further to benefit San Francisco in the following ways: In the creation of a master plan, wide in scope to embrace all inherent problems, including streets and arteries reasonable in grade, consistent in alignment and flow, with adequate width.

(Among the plans suggested by the report were design control over all minor structures, play areas, preservation of landmarks, elimination of noise and odors, universal tree planting for streets and plazas, creation of gardens in streets too steep for motor traffic, attractive appearance for every aspect of the city.—Editor.)



What's behind the TRADE MARK?

BEHIND the trade mark of The Youngstown Sheet and Tube Company is an interesting story. Founded in 1900, its career is a typical American achievement, representing 43 years of steady, substantial growth. As the original plans of its founders have gradually unfolded, Youngstown has been permitted to make material contributions to the welfare of the nation.

Integrity of purpose, courage, ability, a spirit of venture, the will to serve its customers—these are some of the things that give life and substance to the Youngstown trade mark. They have built the company from its small beginning with only a few thousand tons capacity to a position among the leaders in 1943—with an annual capacity of 4,000,000 tons of steel.

We here at Youngstown are devoting our energies 100% to meeting the emergencies of war now as we did in World War I. When peace comes, we shall devote all our resources to the requirements of our thousands of customers old and new.

The YOUNGSTOWN
SHEET AND TUBE COMPANY, *Youngstown, Ohio*
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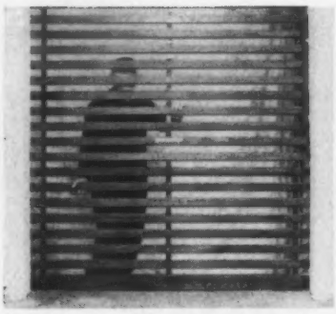
Pipe and Tubular Products • Sheets
Plates • Conduit • Bars • Tin Plate
Rods • Wire • Nails • Tie Plates and
Spikes • Alloy and Yoloy Steels

25-47F

Products Progress

(The columns of this section are open to any manufacturer who has a new product of interest to the architectural profession. Manufacturers who wish to have their product shown should send a glossy photograph, together with information covering the function, characteristics, installation, cost of the product, and a description of what AIA literature is available.)

WOOD GRILLE

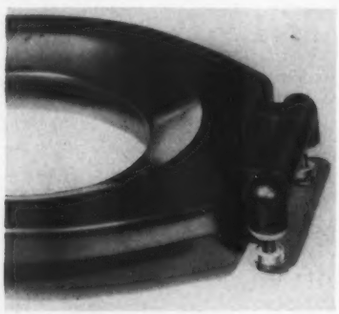


This new rolling wood grille uses wood bars strung on light steel tapes operating up and down in wood guides, coils overhead on a horizontal counterbalancing shaft. The grille can be fabricated for opening widths up to 19 feet, with opening heights unlimited. Operation is either push up or, for larger sizes, by hand chain or electric motor. It locks into the side guide with a padlock and hasp on the bottom bar. Cornell Iron Works, Inc., 36th Ave. at 13th St., Long Island City, New York.

READY-PASTED WALLPAPER

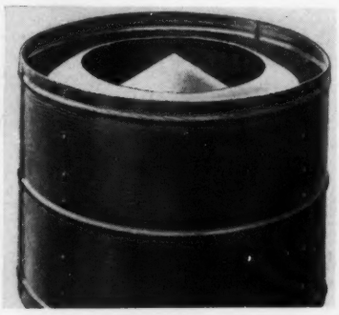
Trimz, a ready-pasted, washable, and fade-proof wallpaper coated with a patented adhesive base, can be hung without the use of brushes, paste, rollers, tables. Immersing a rolled-up strip of wallpaper in water to wet the pre-applied paste coating, and unrolling it right on the wall are the essentials in applying this wallpaper. Hanging is simplified by one foot interval markings, for quick measurement. Available in packages of 18-inch paper in 81-foot rolls. Trimz Co., Inc., 1012 Spaulding Ave., Chicago.

PLASTIC TOILET SEAT



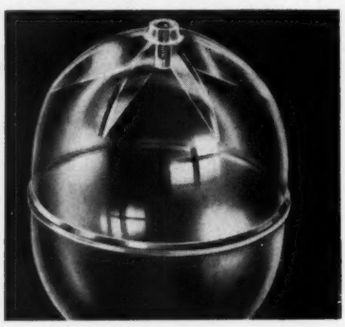
The new San-Duro toilet seat is made of one-piece, molded plastic. Seats are easy to keep clean, permanently retain their finish, are non-inflammable, unaffected by acids, and resistant to oil, grease, alkalis. The toilet seats are made in standard designs to fit the regular oval, elongated, and extended lip types of toilet bowls and come in brown and ebony black. Feature is a new type of plastic hinge by means of which no metal is left exposed to rust, stain, or tarnish. Eclipse Plastic Industries, Inc., 5150 N. 32nd St., Milwaukee.

VENTILATOR



Asbo roof ventilators, designed to afford maximum exhaust, freedom from downdraft, and complete weather protection, are made of asbestos-protected metal sheets, and are available in flat-roof, ridge-roof, and slope-roof types. Seventeen models, ranging in size of roof opening from 15x15″ to 125x125″ are available. American Steel Band Co., Felt-Cote Div., Pittsburgh, Pa. Frame structure designed for 80-mile an hour wind. Weather baffle gives unobstructed ventilator exhaust, assures weathertight protection.

PLASTIC TOILET FLOAT

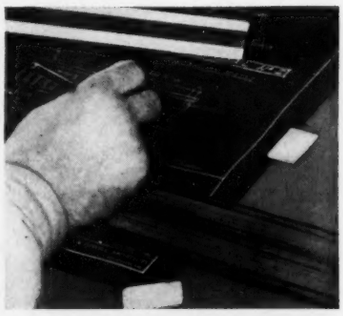


Kirkhill, Inc., 6828 McKinley Ave., Los Angeles, Calif., has introduced a plastic toilet float to replace the copper ones which were manufactured prior to government regulations prohibiting their manufacture out of copper. The new float, which sells for less than $1, measures 4x5″. It is made of crystal-clear Lumarith, and is impervious to water, non-corrosive, and has a tensile strength up to 14,600 pounds per square inch. The plastic float is fully reinforced at the spud where strength is needed.

CLOSET FLOOR FLANGE

Lead Industries Association, 420 Lexington Ave., New York, has adopted a standard specification for the manufacture of hard lead closet floor flanges. Important provisions of the specification are that the thickness of the outer rim of the flange must be ⅜-in., and the total weight of the flange must not be less than 1 lb. 9 oz. Originally, a heavier weight was announced, but manufacturing refinements have made possible the reduction without reducing the thickness or strength of the flange.

DRAFTING AID



A new method of attaching drawings and blueprints to drawing boards, which eliminates the necessity of moving the T-square over thumbtack heads, is the use of Kum-Kleen stickers. These stickers are paper thin, will lie flat, are applied without moistening, and are easily peeled off without affecting the surfaces to which they are attached. All the adhesive remains on the label. Kum-Kleen stickers come in a variety of sizes and shapes and are made by Avery Adhesives, 451 E. 3rd St., Los Angeles, Calif.

ROOF DECKING

A new Gypsum laminated roof decking from Certain-Teed Products Corp., 120 S. LaSalle St., Chicago, is made up of panels of Bestwall Gypsum board, in two types—1½″ thick with tongue-and-groove edges, and 2″ thick with shiplap edges. Panels are light in weight, can be handled, cut, sawed, bored, and laid like lumber, and can be spiked to wood joists without the use of special metal attachments. The new decking uses non-critical materials, and is said to be unaffected by heat or cold. Panels are 24″ wide, and come in lengths of 8, 9, and 10′. Interior surface is ivory.

PLANK FLOORING

This asphalt plank flooring was developed for manufacturing plants, loading platforms, freight houses, and for plants requiring resurfacing of old, worn-out concrete and wood floors. The flooring is said to be resistant to acids, oils, gasoline; noiseless under trucking wheels; resilient, waterproof, durable. Flooring arrives on the job for immediate placement in required widths, lengths, thicknesses; is installed without interruptions to plant operations. Servicised Products Corp., 6051 W. 65th St., Chicago. Catalog available.

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COMBINES SHEATHING, INSULATION, ROOFING IN *ONE* MATERIAL!

Approved by Army Engineers for use in many War Department Projects!

Used on Housing Projects, Barracks, Hospitals, Industrial Plants!

CELO-ROOF combines sheathing, insulation, and roofing. It consists of a vapor-sealed Celotex cane fibre core surfaced with a mineral-surfaced roofing, carrying Fire Underwriters Class C label. A beveled wedge cleat, factory-applied on the under side of each unit, provides a tight, rigid, interlocking joint. Each unit is nailed directly to the rafters and eliminates the need for wood sheathing or other types of boards or strips. It saves time, labor, and critical lumber and nails.

Buildings roofed with Celo-Roof are easy to heat, conserve fuel, keep warmer in winter and cooler in summer. And because Celo-Roof is a full inch thick at the butt, it produces a natural shadow line effect, beautiful to look at and giving a true impression of the ruggedness and durability of this new kind of roof.

Celo-Roof is now specified and being used on many important housing developments, as well as on many War Department projects. Barracks, hospitals, industrial buildings and warehouses can be completed faster when Celo-Roof is used. For the present Celo-Roof is not available for individual houses. Get complete information now!

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THE CELOTEX CORPORATION, Chicago

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Today, with forced economies facing us at every turn, it is more than ever necessary that you choose your pencil with infinite care.

W.P.B. Limitation Order L-227, definitely restricts wood cased pencil production in 1943 and while there is no alarming shortage of pencils at the moment, still it is imperative that pencil users get the greatest value from their pencil expenditures.

KOH-I-NOOR DRAWING PENCILS bring you every pencil quality—smoothness, density of lead, long wear and accurate grading throughout the entire length of lead. Use KOH-I-NOOR to the end.

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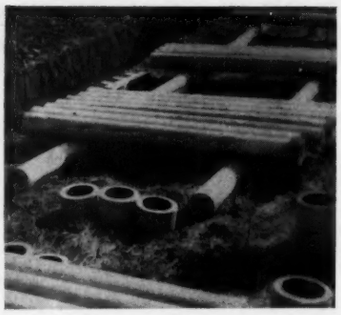
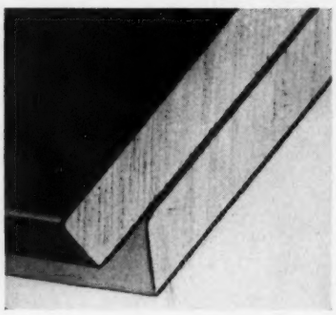
373 FOURTH AVENUE · NEW YORK

ASBESTOS CEMENT CONDUIT



Asbestos cement conduit, intended principally for cable installation, made by Philip Carey Mfg. Co., Cincinnati, Ohio. Feature: Flexcaulk coupling—a tubular housing of asbestos-cement to which is bonded a liner of mineralized asphalt compound. Conduit comes in two thicknesses, for installation with or without concrete encasement. Assembled and cut on the job.

GYPSUM SIDING BOARD

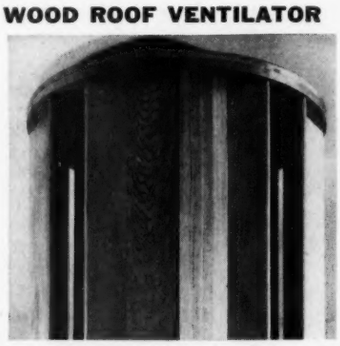


A fully-weatherproofed gypsum siding board, designed for "duration" war buildings, made by United States Gypsum Co., 300 W. Adams St., Chicago. The entire board is sealed, to a practical extent, against the weather. Olive green outside surface needs no paint; manila inside surface may be left exposed. A carpenter can complete 16 sq. ft. of wall in less than five minutes.

LEAD CALKING FERRULES

Of non-critical material, this hard lead calking ferrule, developed by Lead Industries Association, 420 Lexington Ave., New York, can be welded or wiped to lead pipe and is said to be strong enough to stand calking into cast iron pipe with lead wool or poured lead. Made in 2, 3, and 4-inch sizes, and tested satisfactorily at pressures exceeding those met in required plumbing tests.

WOOD ROOF VENTILATOR



This wood Air-X-Hauster, made by G. C. Breidert Co., 634 S. Spring St., Los Angeles, represents a new principle in ventilator design. Wind striking it at any angle sets up a suction action which exhausts the inside air. Ventilator has no moving parts, is made of kiln-dried wood, and is treated with wood preservative. Tongue and groove construction uses few nails.

ELECTRONIC MOTOR DRIVE

Electronic adjustable-speed drive, the Mot-O-Trol, developed by Westinghouse Mfg. Co., East Pittsburgh, Pa., automatically regulates preset motor speed over a 20 to 1 speed range for DC motors operating from AC. Features: stepless speed control, automatic regulation over wide load fluctuations, full torque at low speeds, stepless acceleration and deceleration, dynamic braking.

Through the Medium of Steel

In the prospect of America's post-war building there is an exciting challenge of new frontiers. Geographical limitations will be erased by the extension of air transportation, while boundaries of architectural thought and execution will be pushed back by new methods and materials.

Stran-Steel's wartime assignment has brought about far-reaching engineering developments in the structural uses of light gauge steel. Today this knowledge is of military value, and is being applied entirely to military uses. When the war is won, it will provide new latitude, new freedom of expression, in varied fields of peacetime construction.

STRAN STEEL

DIVISION OF GREAT LAKES STEEL CORPORATION
1130 PENOBSCOT BUILDING, DETROIT, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

ANNOUNCING

OF THE FENESTRA

WINNERS OF SMALL HOUSE WINDOW COMPETITION

DESIGN PLACED FIRST

Frank F. Polito and Evald A. Young, Oscoda, Michigan, $500.00

DESIGN PLACED SECOND

T. Y. Hewlett, Toledo, Ohio, $300.00

DESIGNS MENTIONED

Karl Kamrath, Houston, Texas, $50.00
Royal Barry Wills, Boston, Mass., $50.00
Robert Arthur Jones, St. Simons Island, Ga., $50.00
Walter Jon Shelly, Jr., Lawrence, Kansas, $50.00

WINNERS OF HOSPITAL WINDOW COMPETITION

DESIGN PLACED FIRST

Percy Cashmore, White Plains, N. Y., $500.00

DESIGN PLACED SECOND

William G. Moeckel, Wilmington, Delaware, $300.00

DESIGNS MENTIONED

A. Ralph Curry, Kansas City, Mo., $50.00
G. Edwin Shofner, Memphis, Tenn., $50.00
Lee Charles Mielke, Chicago, Ill., $50.00
Wendell Clough, Perrysburg, Ohio, $50.00

JURY OF AWARDS

Edward G. Conrad, A. I. A., Cleveland
Robert B. Frantz, A. I. A., Saginaw
Branson V. Gamber, A. I. A., Detroit
Amedeo Leone, A. I. A., Chairman, Detroit
John N. Richards, A. I. A., Toledo
Alfred Shaw, A. I. A., Chicago
R. W. Weed, Detroit Steel Products Co., New York City
C. William Palmer, A. I. A., Detroit, Professional Adviser

REPORT OF JURY OF AWARDS

HOUSE UNIT—FIRST PRIZE—A simple and well proportioned unit which seems to meet the scale of the small house. Its horizontal dimension makes for easy sliding. Muntins, if desired for architectural effect, might be wider so as to count in the pattern of the window. The unit size is such that it is easily adaptable to a sash without muntins if one so desires. The frame for the sliding screen might be simplified. Weather stripping should be provided at the meeting rail.

HOUSE UNIT—SECOND PRIZE—This design of a sliding unit was one of the few submitted which the jury felt the competitor had made an effort to develop, which might be manufactured and made available for the $5,000 house. The details are simple, well studied and easily erected. However, the general appearance and proportion of the unit are too reminiscent of the existing standard casement window.

HOUSE UNIT—MENTION—An imaginative scheme submitted by a contestant having a fine sense of delineation. Allowing for the use of hermetically sealed plastic glass, it is not quite clear how the plastic is held to the frame. The operating stability of the ventilating sash is questionable with the use of the piano hinge and the nylon chord. The remote control for the spring gearbox at the sill suggested by the designer is not in keeping with the cost factor involved in the problem at hand.

HOUSE UNIT—MENTION—A scheme which shows originality in the use of plastic material for the window area and minimum use of metal for the frame. No provision

Fenestra POST

THE WINNERS
ARCHITECTURAL COMPETITIONS

is made for the disposal of water accumulating in the sill section. The operating handle detail is questionable. The application of this extremely modern type of window to a traditional basic house seems somewhat incongruous.

HOUSE UNIT—MENTION—A well developed scheme showing a vertical sliding sash unit of light gauge metal which provides two-thirds opening in the window. It was the general opinion of the jury that the unit was not large enough for the use of three receding sash, as well as being excessive in cost for the type of window called for in the program. Objectionable sight lines might develop when the window is fully opened with the movable sash behind and in front of the middle stationary unit.

HOUSE UNIT—MENTION—A scheme cleverly presented showing the use of "large area of glass suggesting the feeling of space" outside the house. This is an interesting solution, yet it seemed to the jury that it lacked practical detailed study. The aluminum sections shown seem inadequate in size for the large areas of glass involved. The lift-lock would be awkward to operate from the floor and its material is not clear. The horizontal sliding sash detail is not shown. The removable storm-pane unit is much too cumbersome to be held by screws without the use of frames.

HOSPITAL UNIT—FIRST PRIZE—A design embodying slanting fixed sash with opening vents between the sash operated by a gear. This window makes for distributed ventilation, easily controlled and with no direct drafts. No provision is made to clean window from the inside. The jury felt that of all those submitted, this seemed to offer possibilities with further study in the ventilating units.

HOSPITAL UNIT—SECOND PRIZE—A more familiar type of window with the hopper vent. The jury did not see added advantage to the slant of vent, either for appearance or practicability. Vertical sections are too small for rigidity required in the operation of sash, and the mechanical operation of the vertical sash is not clear. The center control mullion should extend down between the hopper sash for stiffness of construction. One of the few schemes submitted where the sash may be cleaned from the inside.

HOSPITAL UNIT—MENTION—A well presented sheet showing a horizontal sliding sash. Various members of the jury were of the opinion that while it made an attractive window and with the details thoroughly studied except the sill section, it had the objectionable feature of direct drafts.

HOSPITAL UNIT—MENTION—This design is based on the center section being fixed and with the horizontal gliding end sash. The metal details have been carefully developed with the possible exception of the double glazing detail which is not airtight. When the window is fully opened, the large center area loses its picture value by the operation of the end sash meeting in the center of the window. Here again the jury felt that no protection against drafts had been provided in the operation of the unit.

HOSPITAL UNIT—MENTION—In the analysis of this window, the jury agreed the details were too complicated for the size of window and expensive to manufacture. If it were four units high and it might have to be for a hospital room, top sash would be inaccessible for hand operation.

HOSPITAL UNIT—MENTION—This design seemed to the jury to be applicable to a special condition rather than a general type of hospital window. The ventilator at the head is impractical to operate through the screen. The louvre feature below the window sill is an attractive one and while the competitor suggests that "the sash manufacturer, using war production tools, makes aluminum ventilation filter heating unit used every second or third opening as needed," it was felt by the jury that this item might better be furnished by other contractors.

DETROIT STEEL PRODUCTS COMPANY
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Leading architects and designers have called upon Brasco continually to bring their modern store front ideas into actual being, knowing well how faithfully their plans would be interpreted and carried out.

The names which these architects have placed over Brasco Fronts are synonyms for success throughout the retail field — outstanding chains, well-known department stores, strong, thriving independents.

This double achievement of serving successfully both architect and merchant, is the logical result of Brasco's ultra-modern attraction value, built upon exclusive, patented, time-proven features of quality heavy-gauged construction.

Although our production is concentrated entirely on war work, Brasco Construction may still be obtained from our Distributors' stocks, for all installations permitted by WPB.

Brasco
MODERN
STORE FRONTS

BRASCO MANUFACTURING CO.
HARVEY (Suburb of Chicago) — ILLINOIS
National Distribution Assures Effective Installation

NRPB Asks $7,695,000,000 For Postwar Public Works Program

National Resources Planning Board Fights for Existence

Washington—The National Resources Planning Board, in a report issued on April 27, called for a shelf of Federal public works projects at an expenditure of $7,695,000,000 which could be used in the postwar period as a buffer against unemployment. The outline of the work to be done is contained in Part II of the NRPB development report for 1943, "Wartime Planning for War and Postwar."

The projects which have been proposed by the NRPB are broken down into three groups. In the first group are those projects which are reported to the Board as being under study by sponsoring Federal Agencies, and include work involved in surveys which are already authorized or now under way. The Board has allotted $1,350,000,000 to this group of projects. In the second group are unauthorized projects—projects which have been proposed by Federal agencies but for which Congress has not yet granted authorization.

In the third group are authorized projects or those which require only Presidential authorization. In this group is included the additional work needed after June, 1944, to complete works now, or have been, under construction, and authorized projects available for future construction.

At the present time the NRPB representatives are urging the House Appropriations Committee to grant the Board the $1,400,000 fund which it needs to continue its work. The Committee had eliminated the NRPB request from the Independent Offices Appropriation Bill in February. NRPB officials believe that all public works planned by the Federal government would not be sufficient to employ more than 100,000 at the end of the war. The Board points out that private and Federal construction in prospect would employ only about 1,000,000 workers as against the 2,700,000 employed by the construction industry during the war.

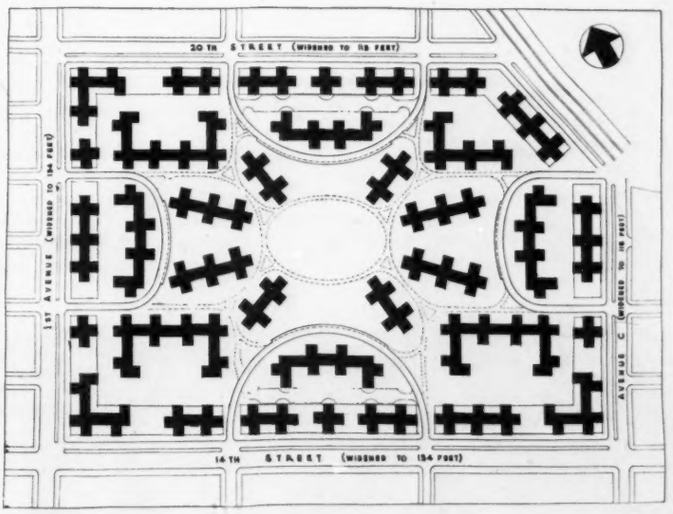
Metropolitan Project to House 30,000

New York—Residential rebuilding on a huge scale in the lower Manhattan area will be undertaken by the Metropolitan Life Insurance Co. as soon as practicable after the war. The project, according to the tentative plans, will house about 30,000 persons and will cost between $40 and $50 million. Rents will average about $14 a room. The actual boundaries of the section are 14th and 20th Street, First Avenue to Avenue C. Metropolitan calls it a park-like development; but, without having more than the present meagre information, it is hard to say whether the nice symmetry of the plan is human or monumental. Have orientation for sun and breeze been sufficiently considered? Does the cruciform plan provide sufficient privacy for tenants, or does it only squeeze out of the project the maximum of rentable space?

The recently-amended Urban Redevelopment Companies act of New York State allows insurance companies to own, construct, operate housing developments with the cooperation of municipalities. Several civic groups have attacked the bill, questioning the granting of special privileges to private enterprise without adequate and continuing control of land use through the City Planning Commission or otherwise, and without greater assurance than is required in the Act that decent accom-

(Continued on page 23, column 1)

Tentative plot plan of the Metropolitan Housing Development


20TH STREET (WIDENED TO 113 FEET)
1ST AVENUE (WIDENED TO 134 FEET)
AVENUE C (WIDENED TO 134 FEET)
14TH STREET (WIDENED TO 134 FEET)

"E" TO JOHNS-MANVILLE

Manville, N. J.—More than 4,000 Johns-Manville workers and members of their families celebrated the formal raising of the Army-Navy "E" flag over the Manville, N. J. factory recently.

THEY SAY . . .

"History is merely gossip."
—*Oscar Wilde*

—That some of the recently built "temporary" buildings of the government's war program have departed so radically from the structural designs and specifications called for by the architects, that letters have been filed by these architects protesting against the low standards substituted and absolving themselves from blame in case of future disaster by fire or collapse.

—That in the not too distant future, ceramic space heaters and ceramic stoves may be available for American purchasers. Evidently the problem of developing a heater which would be light in weight, easy to assemble, and capable of withstanding thermal shock and ordinary wear incidental to use has been solved.

—That the lumber shortage has grown progressively worse during the past four months and has spread to nearly all commercial species.

ESTABLISHES OWN OFFICE

Portland, Ore. — Pietro Belluschi, chief designer for the firm of A. E. Doyle & Associates since 1927, has opened his own office at Jefferson St., in the building occupied by the Doyle firm which has now gone out of business.

BROWN MEDAL TO KAHN

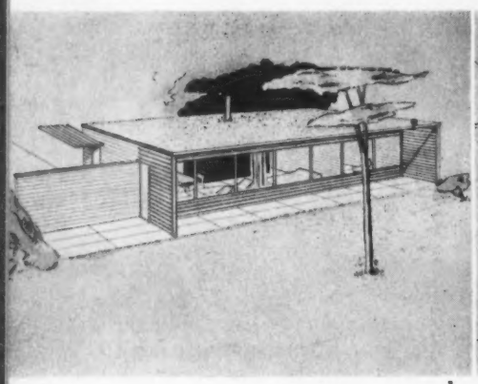
Philadelphia—The Frank P. Brown Medal, awarded annually to an outstanding figure in the building and allied industries by The Franklin Institute, was bestowed posthumously on April 21st to Albert Kahn for his achievements in the development of modern industrial building construction.

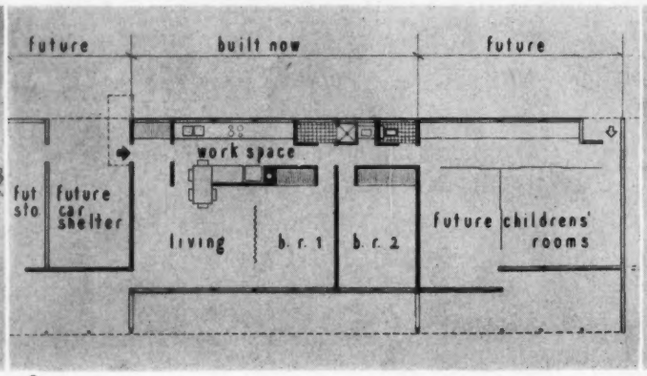
FERRISS WINS AWARD

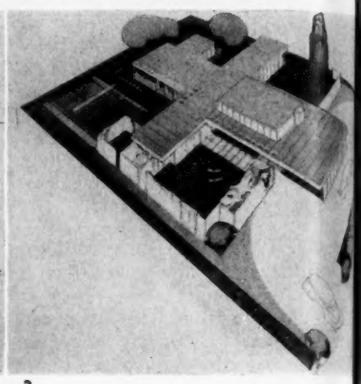
New York—Hugh Ferriss, one of the country's outstanding artists of architecture, was recently awarded one of the ten $1,000 awards given by the American Academy of Arts and Letters and the National Institute of Arts and Letters to creative artists in the fields of music, painting, sculpture, and literature to enable them to continue their work. Mr. Ferriss, whose work has been illustrated in NEW PENCIL POINTS on several occasions, has made drawings of many of the contemporary developments in American architecture and engineering.

THE THERMOMETER MEN AWAKE

LARGE MANUFACTURERS OF BUILDING MATERIALS PROMO[TIONAL]







1 2 3

When a building materials manufacturer buys a page ad in today's popular lay magazines . . . THAT'S NEWS! When furthermore, he uses it to promote a house design that is not Colonial . . . *THAT IS NEWS!* Several manufacturers have done just that. Illustrated herewith are such houses, designed for and promoted by The Celotex Corporation, Revere Copper and Brass, Inc., and Timken Silent Automatic Company.

The unevenness of the design quality, as evidenced by the accompanying photographs, is not, for the moment, as important as is the fact that these three corporations are forgetting their fear of public "good" taste and trying, each according to his light, to educate the ultimate consumers to appreciate the advantages of contemporary architectural design. At long last they seem to have used a portion of that courage which one supposes to be commensurate with their size. The effort is commendable.

These large corporations must make products that sell, must keep their feet—and their ears—on the ground. They hold the thermometer which gauges the state of the public feeling; they determine when the temperature of Mr. Home Owner has reached the point at which it is safe to lead him from his Colonial bed out into modern fields.

Revere Copper and Brass has been a leader in forwarding new ideas and methods of construction. To educate prospective homeowners, this company invited well-known designers and research workers to give their ideas on methods of construction and on types of design for postwar homes. Comparison of the results shows that the modular unit of construction predominates, and that the cost of building by this system has an unexpectedly wide range, with a mean of two to three thousand dollars; low is around one thousand and high, around ten.

Many of the plans allow flexible sizes in living and sleeping spaces by use of movable light partitions, or by sliding draperies, to permit adjustability of such areas to changing family needs. Radiating panel heat in floors and walls is common, as is close relationship between interior and outdoor areas. Several designers have made use of much glass and of extending low roofs to take advantage of the heat of low-slanting winter sun rays, for protection from wind, and for protection from the high, strong summer sun. None of these ideas are really new, but using them in low-cost, prefabricated houses, planned for mass production, is a forward step.

KECK

The plan of the house (Figs. 1, 2) by George Fred Keck is long and shallow, gauged to standard, not specialized, needs. The first unit to be built contains one living room, two bedroom areas, bathroom split into three units entered separately, a "work space" which serves as kitchen, etc., plus an entry area. Two additional units are allowed for later construction, one a car shelter with storage space adjacent, and another comprising two children's rooms. Plans also include the possibility of connecting, to this house, another house of similar but reversed plan.

Without calling undue attention to itself, this house contains many of the practical, functional and economical improvements. The flat house roof is planned for a sod covering, or for a shallow sheet of water to insure summer coolness, as well as for snow retention which serves as insulation in winter.

Cost is said to be $4,000.

HARRIS

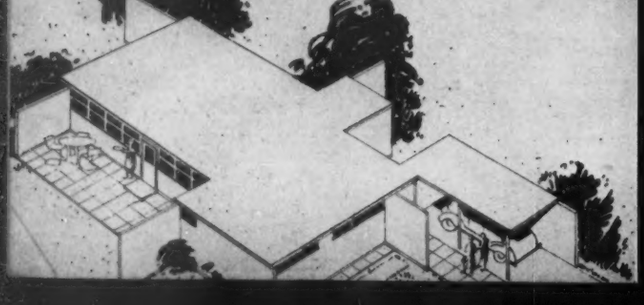
The "segmental" house (Figs. 3-6) designed by Harwell Hamilton Harris is chiefly unusual because of its ability to be extended, through many stages; first, it serves persons of low income and simple needs and at the final stage serves a large family of comparatively high income and involves living habits. Such a method of slow growth through ten stages, when applied to a community of houses, has the advantage of constantly improving real estate values, offsetting the usual tendency toward depreciation. Enduring materials are called for, commensurate with the final size and purpose of the house. Garden spaces are stressed and treated as rooms and as continuations of rooms. The cost of the first unit is quoted as starting at $3,500 and ranging up to $10,000 for the completed house.

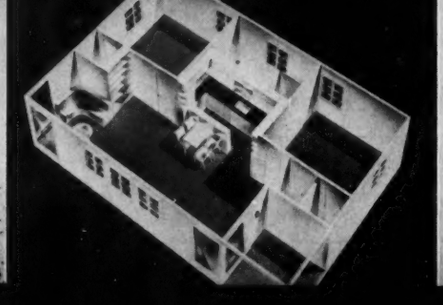
The Revere group contains three more houses of especial interest.

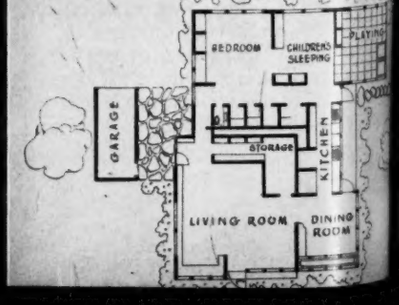
BEL GEDDES

The design by Norman Bel Geddes uses *27* basic units. Wall sections four inches thick and floor and roof sections six inches thick consist of metal or plywood sheets separated by a core of expanded sheet metal (Fig. *7*). The structural core

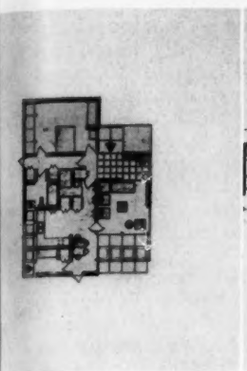
8 9 10







OUSES OF PROGRESSIVE DESIGN FOR POSTWAR PRODUCTION



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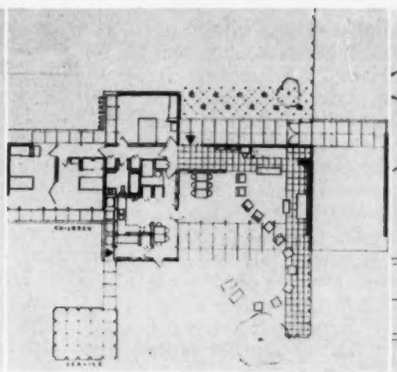

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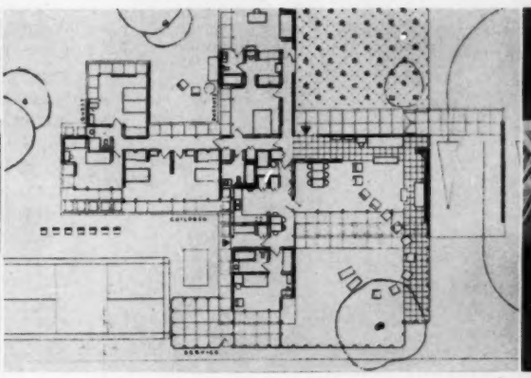

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is welded to the surface sheets and plywood is bonded to interior surfaces. The structure is insulated, weather-tight, moisture-proof, and rests on seven concrete piers. The 27 basic units make 11 different house designs. It is estimated that six men working one eight-hour day can complete construction. Cost is listed at $1,950.

KOCHER

The distinguishing charactertistic of the A. Lawrence Kocher design (Fig. 8) is the large size of the basic units, their limitation being only the capacity of the average truck which transports them from factory to building lot. 36 units are planned. Mr. Kocher's reasons for such large panels is economy of construction as well as variety in design, monotony of design being more difficult to avoid when small basic units are used. Cost—about $2,000.

TEAGUE

The Walter Dorwin Teague design (Fig. 9) is estimated as the lowest priced house of the groups reported in this article, starting at $1,000. It is composed of 3x12 ft. floor panels, 4x13 ft. ceiling and roof panels, and 4x8 ft. wall panels, all being about 4 in. thick. A service unit of kitchen and bath is lifted into place, first, by a crane on the delivery truck. The rest of the sections are fitted into place around this unit, floors first, interior partitions second, outside walls third, and ceiling and roof units last. Mr. Teague's theory that such a house can be moved from one location to another easily and returned "on account" to the factory in exchange for newer and larger units is within reason.

The Celotex Corporation asked each of three architects to contribute a house design for prefabricated construction. These houses are of similar character to those created for the Revere group. One of the architects, George Fred Keck, designed for both manufacturers. Both examples show attacks on the very average house problem and simple, sound solutions.

RAYMOND

The special contribution of the design by Antonin Raymond (Fig. 10) is the placement of all mechanical equipment at the center of the house . . . "heating and air conditioning plant, bathroom and separate toilet room, laundry, kitchen, electric refrigerator and freezer . . . all will stem from a single shaft running the height of the house to a skylight through which will come light and ventilation."

OWINGS

In this design (Fig. 11) by Nathaniel Owings a strong effort is made to unite the outdoor terraces with the interior spaces. There are prefabricated kitchen and bath units, large closets, air-conditioning, cross ventilation, ducts in kitchen to withdraw cooking fumes, and bathroom equipped with devices to prevent steam forming on mirrors and walls.

Bror Dahlberg, president of Celotex Corporation, in a recent speech, said that after the war millions of men will be returning from the armed services, eager to get back into civilian jobs and homes. He estimated that the building industry can supply a large portion of both needs if the estimated quota is undertaken—1,000,000 homes in urban districts—500,000 in suburbs and on farms—per year for ten years.

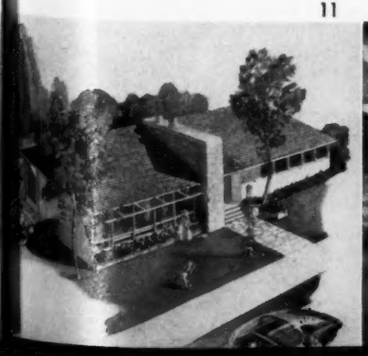
WRIGHT

The Timken company, one of the foremost manufacturers of heating equipment, asked D. Allen Wright to design three houses for them. See figures 12 and 13. It is defficult to see how any except most peculiar family needs are fulfilled by these plans. However, in spite of the eccentric quality of the design, Timken is to be congratulated for its effort in forwarding the movement to interest the public in prefabricated housing.

LEGEND FOR ILLUSTRATIONS

1. House by George Fred Keck
2. Plan—Keck house
3. House by Harwell Hamilton Harris
4. First stage of plan—Harris house
5. Intermediate stage of plan—Harris house
6. Final stage of plan—Harris house
7. Construction of unit panels—Bel Geddes house
8. House by A. Lawrence Kocher
9. House by Walter Dorwin Teague
10. Plan of house by Antonin Raymond
11. House by Skidmore, Owings & Merrill
12. House by D. Allen Wright
13. House by D. Allen Wright

11



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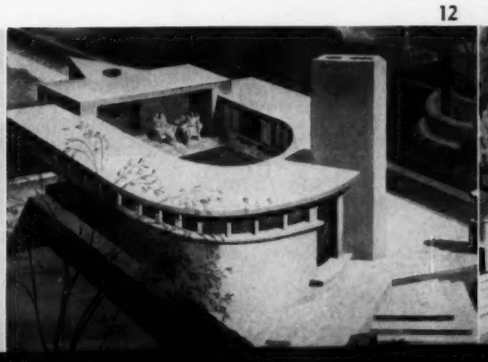

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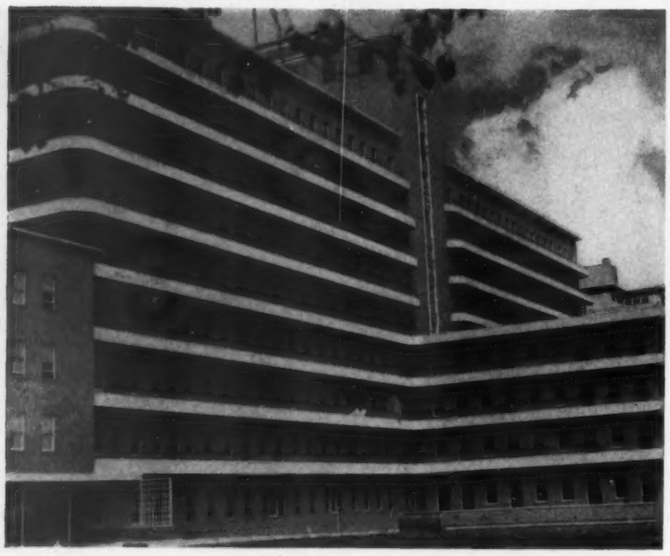
LEND-LEASE PROVIDES TEN-STORY HOSPITAL IN AUSTRALIA



Australia—The government of Australia, under its program of reciprocal lend-lease, has provided the United States with this new ten-story hospital "somewhere in Australia." The building was constructed as a civic enterprise at a cost of $3,000,000, and is complete with laboratories, operating rooms, nurses' quarters, and administrative offices. OWI, source of this photograph, says the main buildings are well arranged and quiet.

MICHIGAN ARCHITECTS ELECT THORNTON PRESIDENT

Detroit — The Michigan Society of Architects elected John C. Thornton, A.I.A., president for 1943. Mr. Thornton is head architect, Detroit Edison Co. Other officers elected: Vice presidents — Roger Allen, R. B. Frantz, A. N. Langius; E. W. Pellerin, secretary; L. E. Caldwell, treasurer; Talmage C. Hughes, executive secretary.

PORTLAND CEMENT USE TO DROP IN 1943

Washington — Domestic consumption of Portland cement for 1943 is estimated by the War Production Board at 107,788,000 barrels, a decrease of 39 percent from the 1942 figure of 177,480,000 barrels. The estimate should furnish an approximate estimate of the probable drop in requirements for sand and gravel used in construction, the WPB Building Materials Division says.

NEW YORK CITY EARMARKS $1,802,568 FOR POSTWAR

New York—The New York City administration has earmarked almost $2 million for postwar plans of various construction jobs. From August 25, 1942 to March 11 of this year, the Board of Estimate has approved fees to be paid to the following architects: Gilmore D. Clarke, $189,000; Aymar Embury II, $86,105; Skidmore, Owings & Merrill, $29,120; Starrett & Van Vleck, $88,500; Eggers & Higgins, $60,840; Alfred Morton Githens, $25,200; Andrew J. Thomas, $40,000; Harrison, Fouilhoux & Abramowitz, $60,000; Herbert A. Magoon, $10,600; Tachau & Vought, $9,080; Louis Allan Abramson, $11,250; Bloch & Hesse and Pomerance & Breines, $13,500; Lorimer Rich, $16,000; Charles B. Meyers, $20,000; Frederick L. Ackerman, $7,850; Theodore de Postels, $5,000; M. Righton Swicegood, $6,000; William Lescaze, $10,000; Randolph Evans, $2,500; Corry & Zurmuhlen, $60,000; Henry V. Murphy, $11,600; Walter Frieling, $5,000.

A. F. Gilbert, architect, was designated by the Board of Education to design proposed new Manhattan school to be erected after the war, one of a group to be designed by private architects. Recently, civil service architects attacked, in court, the Board's right to employ private architects for school jobs. However, the New York State Supreme Court later upheld the Board.

URBAN REDEVELOPMENT ACT TO AID BLIGHTED AREAS

Washington — Senator Thomas, Utah, recently introduced a bill (S 953) in Congress calling for the establishment of an Urban Redevelopment Agency which would provide financial assistance to municipalities and urban areas for their development. The Bill calls for a $150 million appropriation.

The URA would be empowered to "make advances to municipalities for the acquisition of real property for carrying out plans for the development of . . . areas for future development . . . A municipality shall be obligated to repay . . . by income debentures . . . from rentals received by the municipality from . .. leases . . . in which properties . . . may be located."

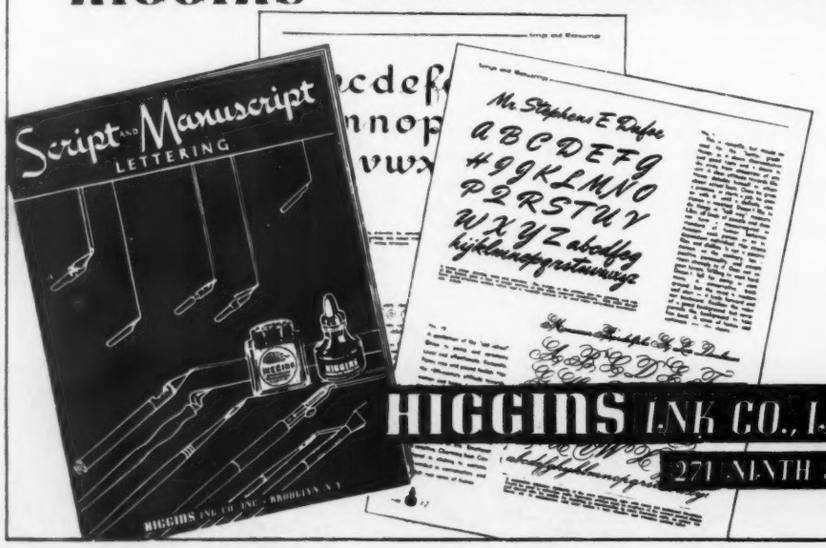
To qualify for URA funds, municipalities must have a planning agency and master plan showing specifically how it plans to develop the land to be purchased with URA funds.

FLEMING ASKS FOR POST-WAR BUILDING PLANS NOW

St. Paul, Minn.—Postwar public construction is being projected here and there but "very little has been done to translate paper proposals into steel, stone, concrete—and jobs," Maj. Gen. Philip B. Fleming, FWA Administrator, declared recently.

"This is the next step that must be taken," General Fleming said here. "Whether Federally or locally directed, it should be done now."

HIGGINS AMERICAN DRAWING INKS FOR Script Lettering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METROPOLITAN HOUSING PROJECT

(Continued from page 19)

modations shall be available to which displaced families may move.

The population density permitted by the City Plan Commission for the area involved is 416 families per net acre. This figure was arrived at, however, on the basis of the minimum standard room areas for low-cost housing projects. In the Metropolitan project the rooms would, of course, be larger, which would lead to buildings of greater bulk and height than was contemplated.

Plans are at present in a tentative stage but no indication is made of how the new tenants will adapt themselves as a community since apparently no shopping or amusemen centers are scheduled.

New York's Mayor LaGuardia said that a new school will be provided in the neighborhood.

MUSEUM PLANS ARCHITECTURAL EXHIBITION

New York—The Museum of Modern Art has announced plans for an exhibition and book devoted to the best American buildings of 1932 to 1942, the decade since the Museum's first show of modern architecture. The selected buildings will probably number less than 50, including industrial structures and housing projects. Only buildings in the United States and its possessions are eligible. The architectural magazines will be thoroughly combed for material, but architects are invited to send information, photographs, and plans of unpublished work to Elizabeth Mock, Museum of Modern Art, 11 W. 53rd St., New York.

WILLIAMSBURG HONORS RESIDENT ARCHITECT

Williamsburg, Va.—A. E. Kendrew, who came to the Colonial Williamsburg Restoration in 1929 as a member of the staff of Perry, Shaw and Hepburn, Architects of the Restoration, to serve as Resident Architect, was recently appointed a vice president of the Restoration.

PLANNERS TO MEET

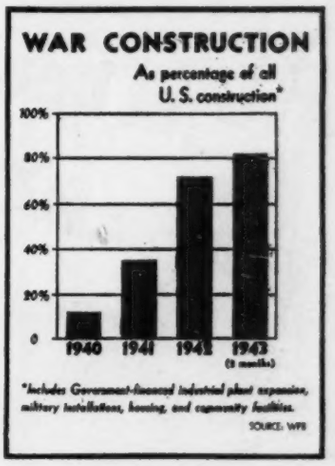
New York—The American Society of Planning Officials will hold its annual meeting here at the Hotel Pennsylvania, May 17-19. Planning problems arising from the war and postwar period will be discussed by such noted officials as Carl Feiss, Frederic A. Delano of the NRPB, Dr. C.-E. A. Winslow, NHA Administrator John B. Blandford, Jr.

A.I.A. CONVENTION

Washington—The 75th annual meeting of the American Institute of Architects will be held at the Netherland Plaza Hotel, Cincinnati, Ohio, May 26-28. This 1943 annual meeting will be devoted primarily to "The Architectural Profession in the Postwar Era."

The Institute's Committee on Postwar Reconstruction will present its report, Planning for Urban Redevelopment," at the annual meeting.

The Institute has announced that Albert Kahn, shortly before his death, gave the Institute a grant of $10,000 to be used as awards for recognition of outstanding work by members. There has been formed The American Architectural Foundation, in whose care the fund has been placed, to await opportunity after the war to put into effect the plan which had been developed with Mr. Kahn's approval. In the postwar period, over a number of years, the sum will be spent for awards to be made by the Foundation in recognition of meritorious professional work by architects.



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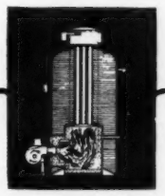

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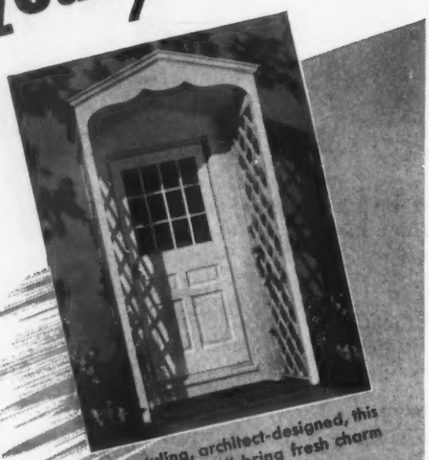
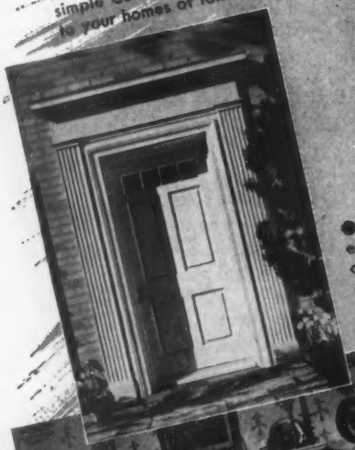


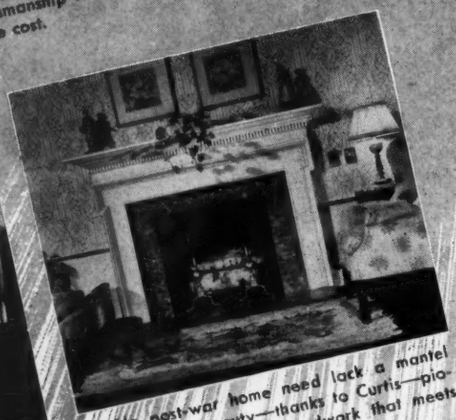
● Authentic in styling, architect-designed, this simple Curtis entrance will bring fresh charm to your homes of tomorrow.

THEY'LL be hungry for *beauty*—those post-war clients of yours! They'll want their homes to have the grace and charm they have pictured in their dreams. Yet they'll want *low cost,* too. How can Curtis stock woodwork help you meet these needs? Why can Curtis woodwork help you meet them *better?* These pictures—including some of the *new* low cost designs in the Curtis line—may give you the answer . .



● Yes, this is stock woodwork—one of many examples of the way Curtis provides quality craftsmanship for the home at low or moderate cost.

● To impeccable woodwork design, Curtis has added modern functional utility—as exemplified in the interchangeable parts of this low cost mantel.



● No post-war home need lack a mantel of enduring beauty—thanks to Curtis—pioneer manufacturer of woodwork that meets every standard of good taste.

● You would expect such fine detailing only in the most expensive woodwork. This is one of the newer designs of Curtis China Closets.

● This beautiful stairway was assembled from Curtis stock stair parts. The Curtis line includes distinctive stairwork for all architectural styles.

As an aid in planning the homes of tomorrow, we should like to send you our book *"New Woodwork in Tune with the Times."* You'll find this full of new woodwork ideas by some of America's outstanding architects. Mail your request to Curtis Companies Service Bureau, Dept. PP-5W Curtis Bldg., Clinton, Iowa.

1866
CURTIS
WOODWORK

Whose Responsibility?

The war, with its shortages of material and its pressure for speed, has had a way of cutting down on building standards. How far should this departure from safe and sound practice be tolerated? Who is now responsible for maintenance of safety in construction? Just because a building to house human beings for the duration is regarded as temporary, may it be properly made so flimsy as to challenge disaster?

Normally, the architect is responsible for the soundness of the structures he designs. His contract drawings and specifications are legally binding on the builder and the architect himself can and does enforce adherence to them. The local building code constitutes a further safeguard.

Today, however, the local codes have been abrogated in favor of a wartime emergency code. Furthermore, federal agencies such as FPHA are empowered to set their own minimum standards and to let contracts to bidders on the basis of structural systems which may or may not come up to a level of safety satisfactory to the architect involved. The architect may protest, but he is protesting to his employer. Acting alone, against a powerful agency, he has no way to insure conformity with his specifications. His only recourse appears to be to file a letter absolving himself from blame in the event of any structural failure in the buildings he has designed. This, we are informed, has been done in at least several instances where the architect or engineer was nervous about the durability of the construction substituted for his own design. So far no disaster has been reported, but a number of fingers are being kept crossed.

An informant we believe to be reliable has described to us a system of construction being used on one or more housing projects for war workers. One-story row housing in batteries of four to six units is involved. The exterior walls are of light frame construction extending on the front and rear for lengths of from one hundred to one hundred fifty feet with no lateral bracing except what is afforded by light interior partitions made of two thicknesses of fibre board spaced slightly apart by strips of the same material. The light prefabricated ceiling panels, toe-nailed to the plate with a single row of nails, furnish slight additional strength, but the whole thing sounds as though a good stiff wind might develop sufficient pressure to blow the walls down. Floors nailed to 1″ x 6″ joists spaced a foot apart and spanning over nine feet do not sound particularly substantial even though braced with two rows of bridging and a tie at the center of each panel.

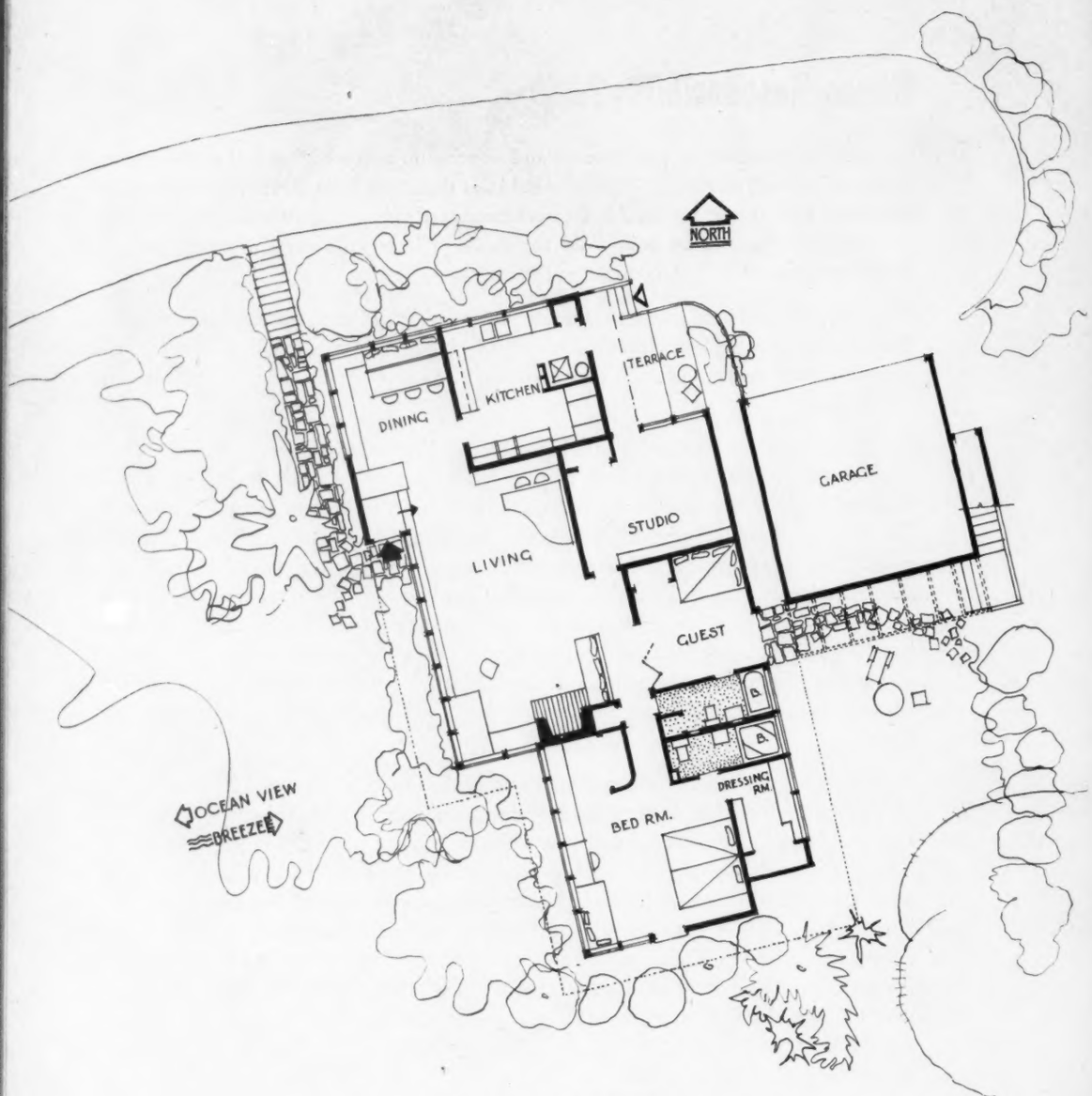
There is no need here to describe the buildings in further detail. They may be strong enough to weather the storms until the end of the war. We assume that the FPHA engineers must have checked the construction and possibly tested it. We hope that this is so.

There seems a chance, however, that some of the buildings being erected so hastily may fail, and we are prompted to ask why such things should not be a subject for investigation by competent committees of professional men independent of the Government agencies involved. Would it not be a responsible public-spirited act for groups of competent architects in each industrial community to examine the "Victory" housing in their vicinity and assure themselves and the public of its safety, rather than to wait until a possibly serious accident, followed by an official investigation, revealed the false economy of building so poorly in the first place?

We realize very well that in this total war it is necessary to conserve materials in every way, and that for this reason lighter construction than usual may be acceptable. We feel, however, that even though war always makes human life seem cheap, the profession of architecture would not be considered over-zealous if it assumed the job of exercising watchfulness over what is being built under the relaxed standards that now prevail. To err on the side of safety may prevent enough loss of life or limb to more than justify the extra professional effort involved.

—K.R.

Architect: Richard J. Neutra
Location: Palos Verdes, California



Scale, $\frac{1}{16}$" = 1'-0"

For the last two decades Richard Neutra has spent much energy on developing various types of light metal construction, continuously endeavoring to reduce the percentage of field work. This house for Dr. and Mrs. Grant Beckstrand, near Los Angeles, is almost entirely prefabricated—and, at least at first glance, most un-Neutra-ish if one compares it with his work as it is usually published. However, to judge by at least two other examples, it is either a manifestation of growth beyond sheer logic translated into architecture, or his previous houses have gotten into print too early.

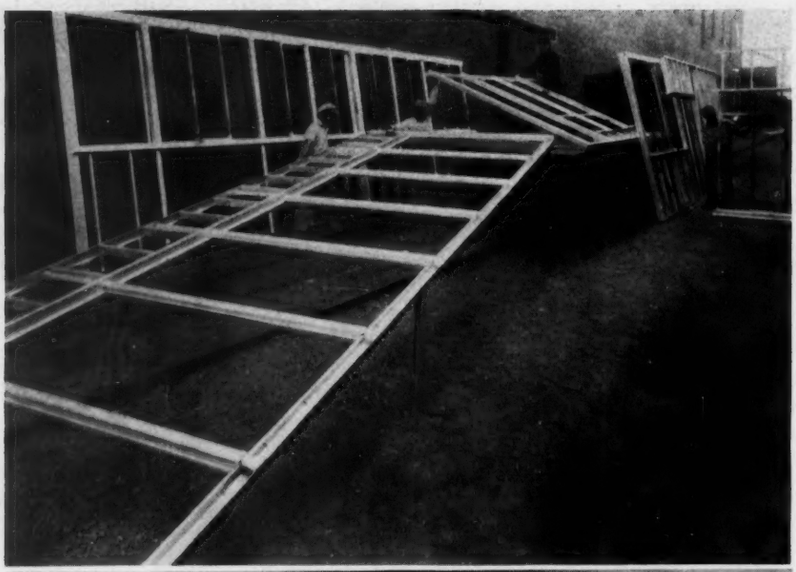
In both the Nesbitt house, developed in brick, wood, and glass and exhibited in both New York and California as one of "Five California Houses," and his own expanded home (published more extensively in the Argentine than here), there has been apparent a graciousness which was somehow missing from earlier, more mental, work. Neutra hailed the Nesbitt house as ending an era. He believed that American prewar residential architecture, due to shortages of critical materials,

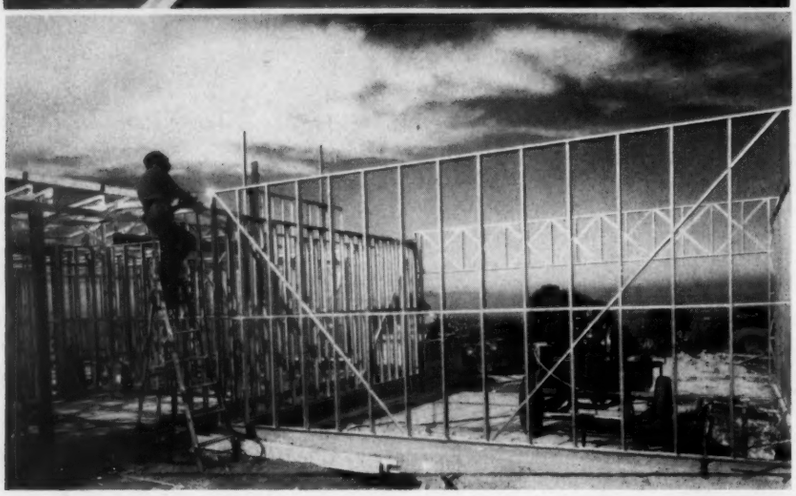
Julius Shulman photo

high wages for servants and higher costs for maintenance, virtual elimination of the automobile for the duration, and all the other war-induced signs of the times, had once more, "perhaps for the last time, momentarily flowered into reality of contemporary value and . . . gained the healthy flavor of necessities."

Perhaps so. Perhaps not; this Beckstrand house is of earlier date than the Nesbitt home, and it is of steel; but the hard, functional, railroad-car lines of windows, the severe cornices and the expanses of walls, do not dominate as once they did. Perhaps Neutra, feeling more certain of his fundamental precepts, can now (consciously or unconsciously) afford to realize that his clients, too, subsist on more than mental food.

The photograph above was taken looking from the living room through the guest room to the patio. Does it look like the Neutra we've seen so often?





Luckhaus Studio photos

When the Beckstrand house is stripped down to its frame, its kinship with Neutra precedent becomes more evident. In earlier examples, the tensile strength of steel was utilized to suspend peripheral portions of floors from a cantilevering roof (the house referred to was on a hillside and required a minimum of foundation); or the advantages of formed sheet metal were applied to making bearing walls, as well as floors, of pre-assembled panels. He used electrically-welded truss joints, but field connections were bolted. All these experimental constructions, which necessitated an abnormal amount of detailing, cost only five or six percent more, on the average, than comparable wood construction. Of course, when the site is a steep hillside, or when, as was the case in the Beckstrand house, labor has to be imported some distance, prefabricated steel construction attains greater practicality.

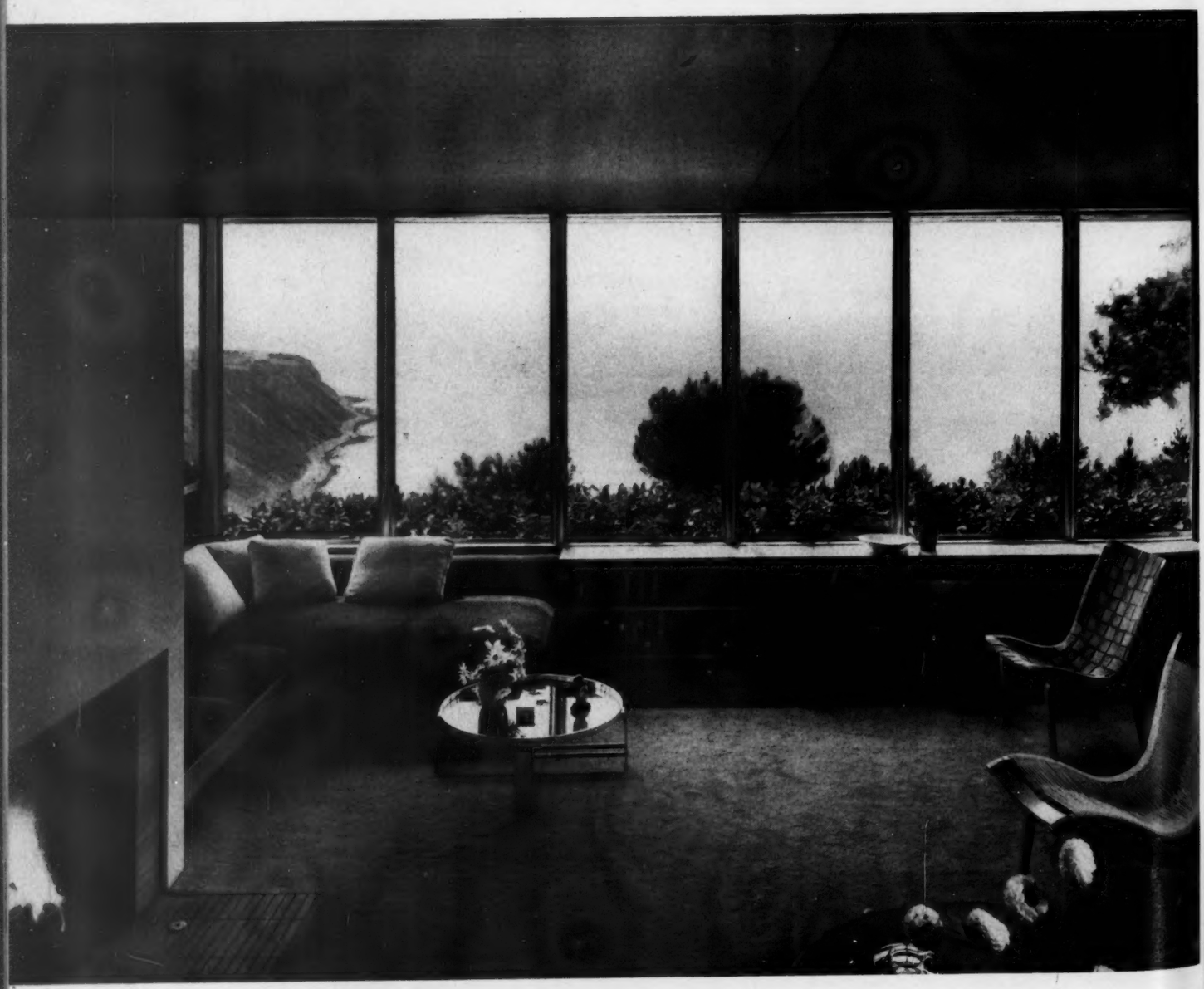
The Beckstrand house is located on a gentle slope overlooking the Pacific. Its frame was prefabricated of steel sections, in units 24 ft. long. These were trucked to the site and welded together. J. S. Capt and P. Pfisterer collaborated in the design. Movable and fixed sash were incorporated into the units at the plant. To this structure insulation board, and in some cases sheet metal panels, were clipped to form interior surfaces. Light metal trusses span the ceilings.

Of the house, Neutra says: "While the light metallic character of the construction is fully visible in the finished product, the house has, according to the owners, a heart-warming, homelike character, achieved by the careful proportioning of rooms; by their relationships and their spacious extension into each other and into the landscaped outdoors; by the carefully-placed, built-in furniture and the friendly color scheme of creams with varied tones of mouse gray and sparing touches of Chinese red which occur on walls, upholstery fabrics, textiles and carpets."

He views light metal frames as a logical descendant of conventional American wooden framing, and as a potentially important method of construction for the postwar period, particularly since the war has so stimulated metallurgy and metal production.

Views above show, top, units assembled at the plant; below, welding at the site. At right is the completed framing of the living room, and on the facing page, the finished living room.

Julius Shulman photos



In these interior views of the Beckstrand house more of the familiar Neutra feeling is present, probably because the parade of windows is again evident. Here again, however, there is a truly domestic, even charming, character. The furniture is much like that which Neutra designed for Channel Heights housing, which is simple, extremely inexpensive, and most comfortable in appearance. Another unusual fact is the inclusion of a few paintings and pieces of sculpture. Ordinarily these are not visible in photographs of his work. But Mrs. Beckstrand is an artist, who is as likely to be found at work in the studio, or painting in the patio, as busy with domestic duties.

Environment controlled the design as much as the family's habits. Strong winds come from the Pacific, over which there is a magnificent view. For the view's sake this side of the house is nearly all fixed glass; the landward, or easterly, side contains the doors and windows which give access and provide ventilation.

In the bedroom below, a mirror at the far end of the alcove doubles the room's apparent size, bringing light and life into what is really rather a restricted space.

Julius Shulman photos

Top, left, fireplace corner of the living room; below, view over the Southern California coast to the Pacific Ocean. The color scheme, cream, mouse-gray, and accents of Chinese red, is carried throughout the house.

Julius Shulman photos

Moving outdoors from within the house, the same residential quality which has been noted inside is visible. It is as though Neutra had recognized the human scale and the decorative possibilities of foliage at about the same time that his houses became more domestic. The vine in the photograph above, looking out from the guest room, is as much a part of the architecture as the disappearing door which slides into the wall.

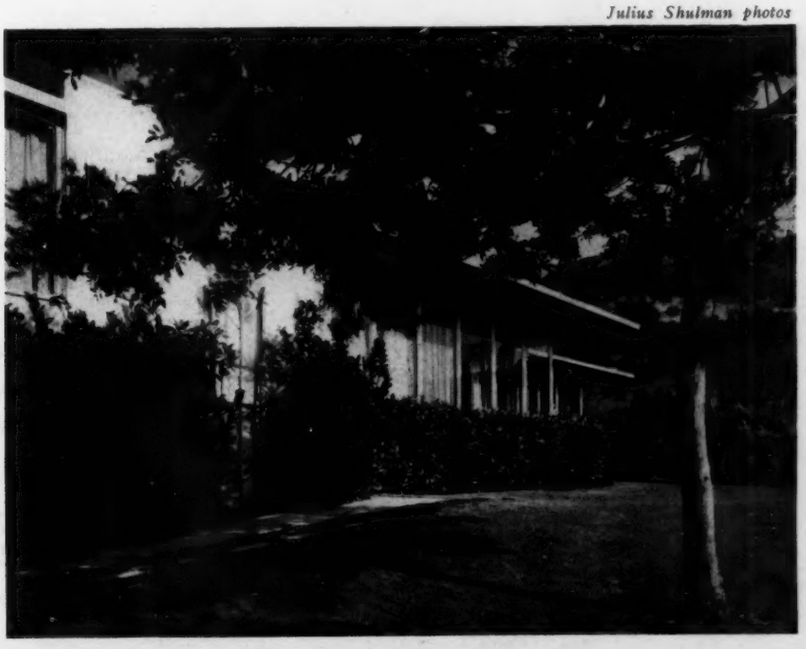
There are probably many other factors contributing to this change in an architect's characteristic way of designing. There are many who believe that an early Neutra failing was a willingness to impose his own personality on houses he designed for others. The most famous of such works were done for movie stars and similar personages, who went to him for the brilliant, glittery—yet almost always sound —structures which they thought they wanted, or the public expected of them, or their producers said their public expected. It was a series of chances to make an impression, something which comes rarely to the average architect, and Neutra was not slow to capitalize upon the opportunity. Having achieved that kind of reputation, he can now attack the far more difficult problem of designing houses to suit their occupants.

In the photo of the bedroom wing, above, there is a quiz problem. Q: What appears here that appeared elsewhere in a previous photograph? A: The identical torso on the identical black pedestal that appears on the preceding page. To call attention to this device—which certainly focuses attention in the photograph—is perhaps not quite fair. But the house needed no tricks. The living patio, below, is on the sheltered side of the house, away from the sea. The outdoor stair at the rear leads to a terrace on the roof of the garage.

On the service and garage side of the Beckstrand house masonry has been used for the retaining walls. The high partition on the roof serves as a windbreak for the terrace over the garage. Below is the entrance from the private drive.

Above, the westerly side of the house, viewed from lower down the slope. Its low horizontal lines do not ape the contours of the coastal hills; walls and roof clothe spaces designed to take full advantage of the site for the benefit of the occupants.

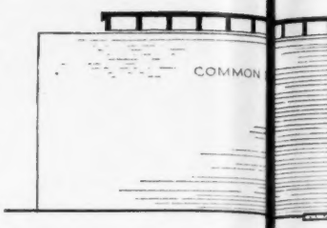
Julius Shulman photos



Looking across the lawn from the garden entrance, there are visible the hills which shelter the house on three sides.

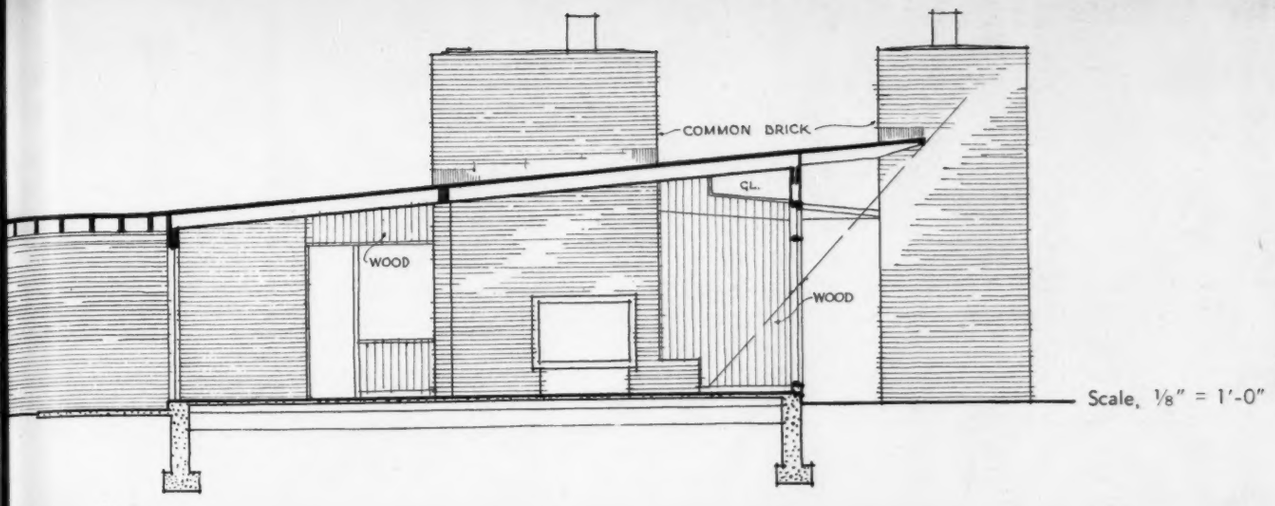
Architect: George Fred Keck
Location: Lake Forest, Illinois

Designed for Mr. and Mrs. Richard E. Pulliam, this is one of the most recent of a series of houses in which George Fred Keck has been experimenting with different methods of heating. It is too early for an authoritative report on costs and functioning; manufacturers of materials involved are understandably reluctant to release exact data until results of tests have been checked. As the section shows, the house is one story high. It is heated by a combination of radiant floor heating, and an expanse of glass on the south side which provides what has been called "solar heating." Of the glazing, Keck writes: "I can only tell you what I have found out in a great many other jobs; the increased glass area, double glazed, properly oriented, will not increase fuel bills . . . Such glass will give, during winter, the feeling of spring experienced on entering a greenhouse (except that in greenhouses humidity is usually higher)."



Hedrich-Blessing Studio photos

Photographs on this page show dining space and the fireplace end of the living room. Plans appear on following pages.

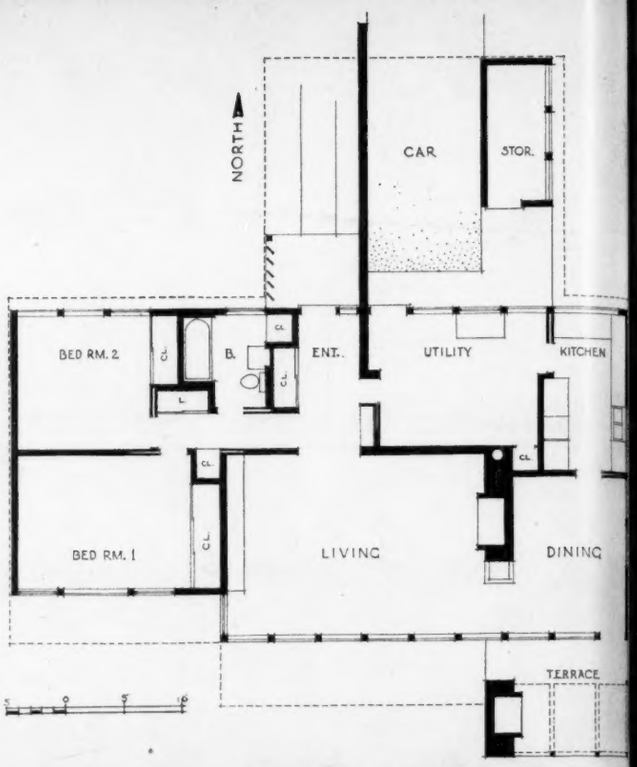


Scale, 1/8" = 1'-0"

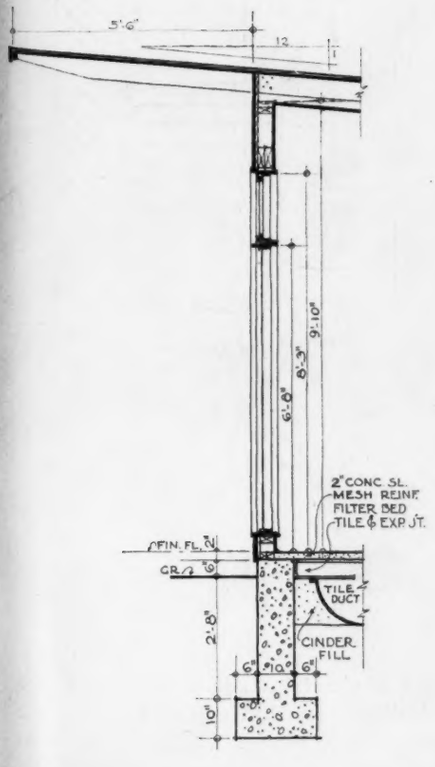
The glass wall overlooks a wooded area to the south. At right, west end of living room. Note the extent to which sunlight penetrates. These photographs were taken at the Equinox, when the projecting roof casts approximately the shadow shown by the dotted line in this section.

The radiant heating system is a floor panel type; the medium is warm air blown through vitrified clay tiles. Because moisture in the heated air is quickly absorbed, by capillary action, into non-vitreous ducts, ordinary baked clay does not prove satisfactory.

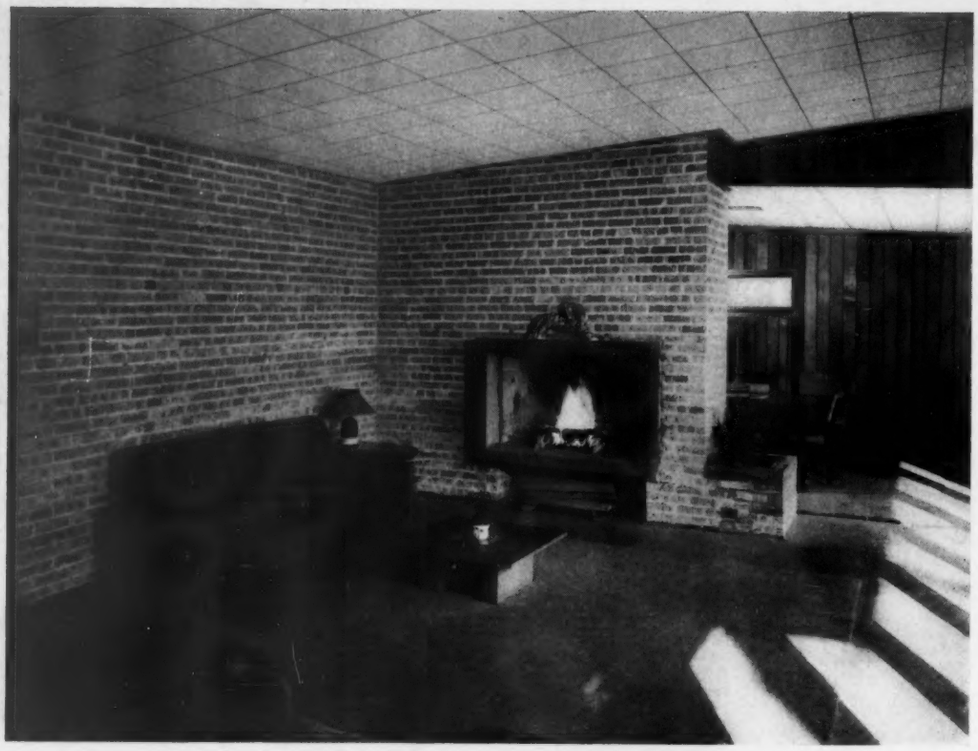
The plan at the right indicates how, by using sliding rather than hinged doors, Keck makes available for use the portions of walls ordinarily reserved for door swings. All windows are double-glazed, and sash frames are painted to cut infiltration losses. The exterior is of natural tongue-and-groove cedar given a coating of preservative. The same material is used inside, where it is waxed. Brick is likewise the same inside and out: Chicago common, warm orange-cream in color, with standard gray mortar joints.



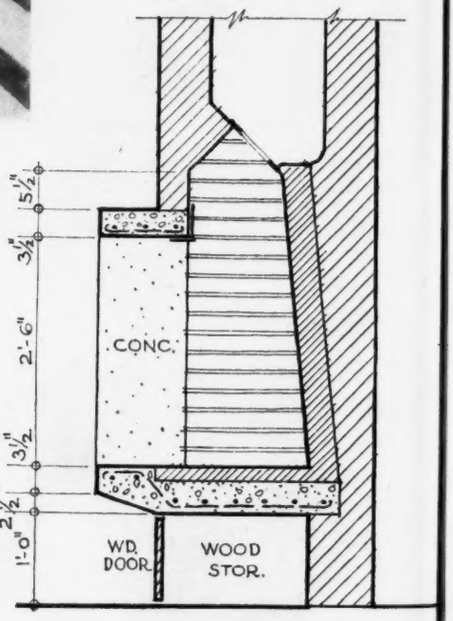
Plan—Scale: $\frac{1}{16}$" = 1'-0"



Section above gives a hint of the design of the heating system. Cement floor is left the natural color; ceiling is surfaced with 16-in. square insulation tile which has acoustic properties. Two photos at right are of the north side; the carport has no doors, and is protected by the outdoor storage room.

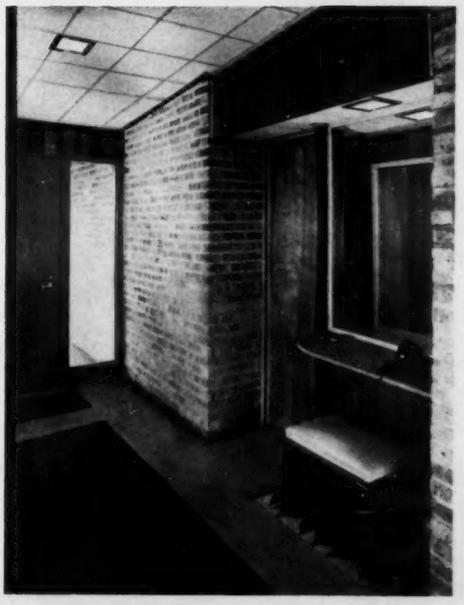


Fireplace—Scale: ½" =1'-0"



The fireplace is raised off the floor, partly to direct its heat to the middle of an adult's body rather than to his legs only. The concrete slabs used in it were precast. Notice that the door of the wood storage space beneath has been omitted. One wonders about the dirt-catching value of the recess.

Photographs show, top to bottom, north and east walls of the living room (with a corner of the dining space visible beyond), bedroom, and dining space. The insulated ceiling is light in color. The orange-cream brick walls and the light coffee-colored living room rug are complemented by the waxed, natural-colored, tongue-and-groove cedar boarding used vertically on the walls. High windows, used everywhere except in the south wall make exterior walls usable for furniture space.



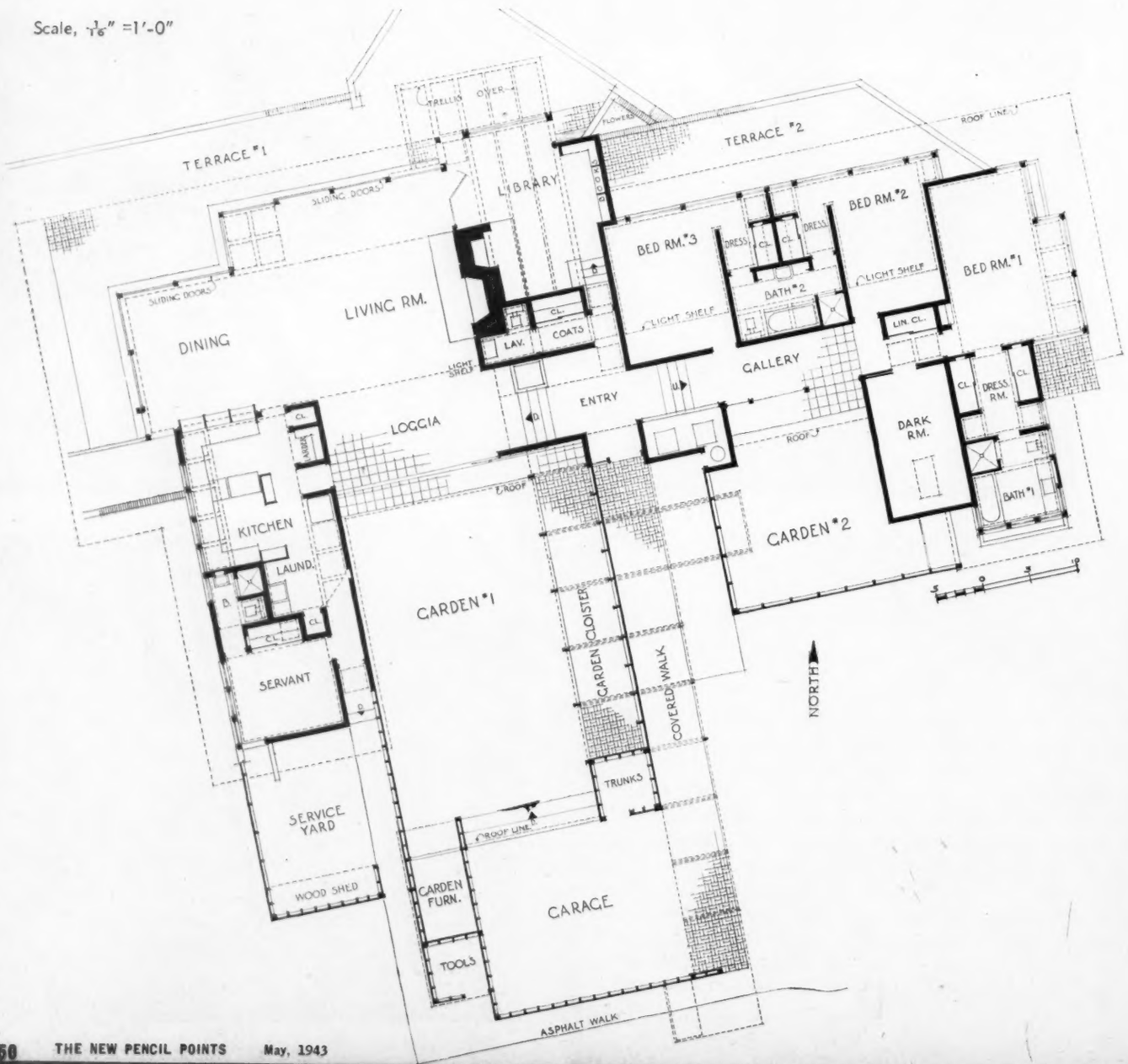
Above is the kitchen; at right, entry hall. Kitchen cabinets, and sliding doors throughout the house, are of natural birch. Wherever possible in this house the simple, direct solution to each problem has been taken. Observe the breakfast bar in the kitchen. From the photographs—the only means of judging appearance in these days of travel limitations—it might appear that craftsmanship was not of the highest order. It then becomes more important that the underlying scheme be straightforward. Also, there is less chance for concealing error than in a more heavily decorated style.

Architect: Harwell Hamilton Harris
Decorator: Paul Bromberg
Location: La Jolla, California

There is an unusual story behind this house—unusual in the sense that it is of a kind not often published, yet, sadly enough, is all too common. It was built, after much commotion, for a bachelor who is a wealthy man, an oceanographer, and an ardent amateur photographer. The owner knew what he wanted, and when he got out from under the designer's thumb he didn't always want—shall we say—what the designer wanted him to want.

It started with a competition in which well-known architects participated. With the competition over and working drawings completed and paid for, the owner found himself dissatisfied. A famous decorator had also completed his schemes for the interior; and it was partly estimated cost which caused the owner to lose courage. After some months, he engaged Harris to do his house, and things proceeded well for some time. The owner's enthusiasm mounted until it almost equaled his concern.

In this period the house as it exists—apart from furnishings—was conceived and well started on its way to execution. The wide projecting eaves, the continuous glazing, all the "architectural" features, were set at this time. The enclosed patio, labeled Garden No. 1, was designed as a theater, and the garage was equipped on the garden side with disappearing doors which open to make the garage interior a stage upon which a concert orchestra can perform or theatricals can be produced. The dark room was likewise provided at this time. The owner is a man of expansive tastes, who is, according to the designer, quite

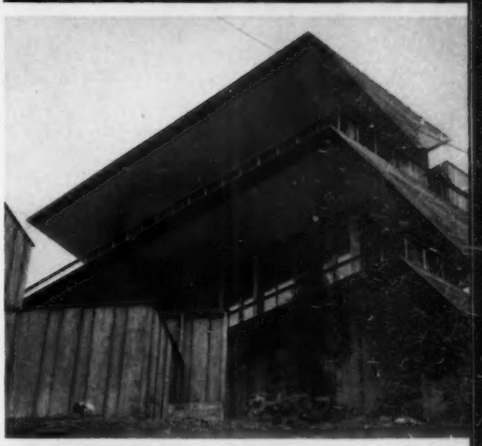


likely to make good use of such exotic provisions. And, surprisingly enough, the cost of the house was substantially reduced over that for previous schemes.

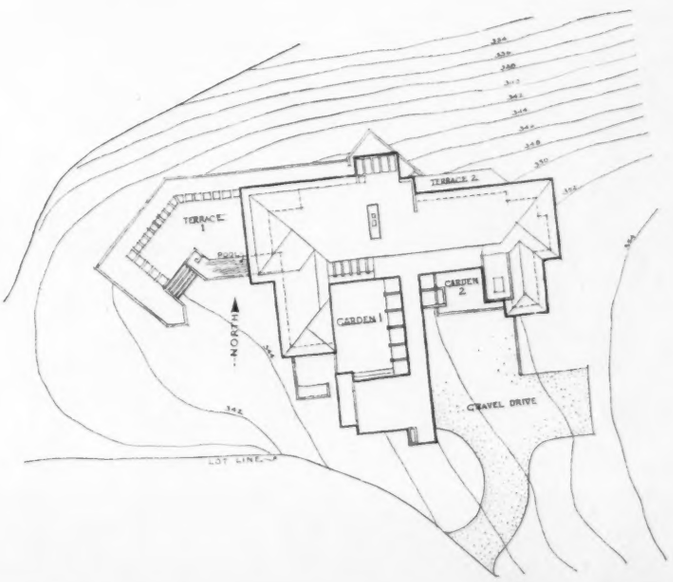
At about this time the owner made a trip, and saw lots of things he wanted in his new home. He engaged an excellent decorator, Paul Bromberg (a fellow-countryman; both are of Dutch origin). It was, of course, a commission to Bromberg; it was also, we may presume, somewhat of an embarrassment to be called in upon an almost-completed job, and to have to reconcile the owner's collection of some really excellent items, an insistence upon reasonable costs, and an understandable desire for good living. Harris and Bromberg have nothing but praise for each other and for their mutual handling of what might have been a difficult situation—to which, happily enough, this job never led.

So much for gossip about the genesis of this house. It makes a good story, which is one reason for printing it; but more important is the house itself.

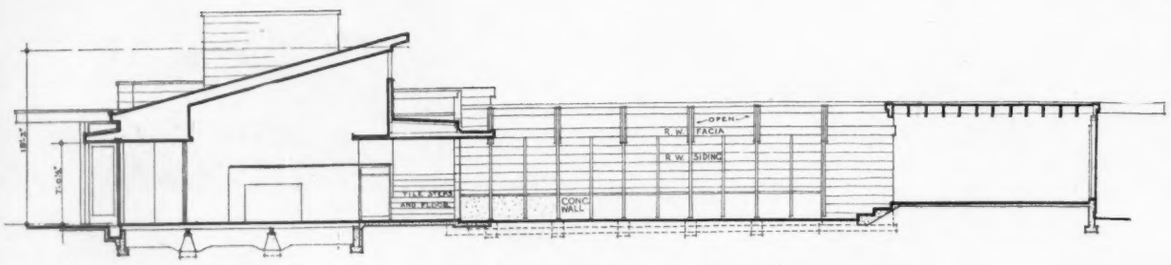
At the right are three photographs of an earlier Harris house in Berkeley, California. It, too, is unusual; it is built at the bottom of a hill, with the sidewalk at top-story level, a bridge from sidewalk to top floor, and sloping ceilings which are carried out to the extremes of the eaves. It is fully Harris; so is the very horizontal house at La Jolla, which spreads flatly along a hilltop overlooking all the other houses in the town, and the Pacific beyond.



Rudofsky photo

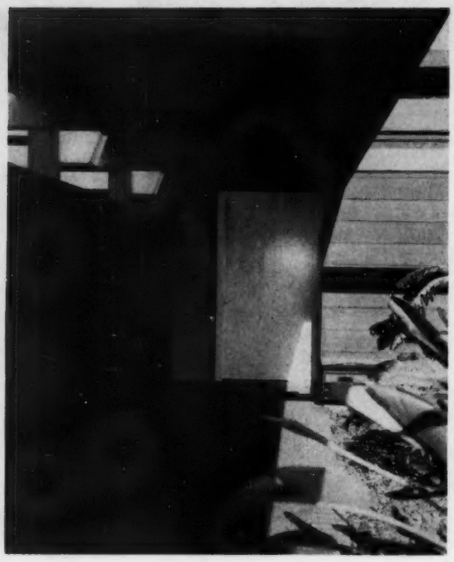


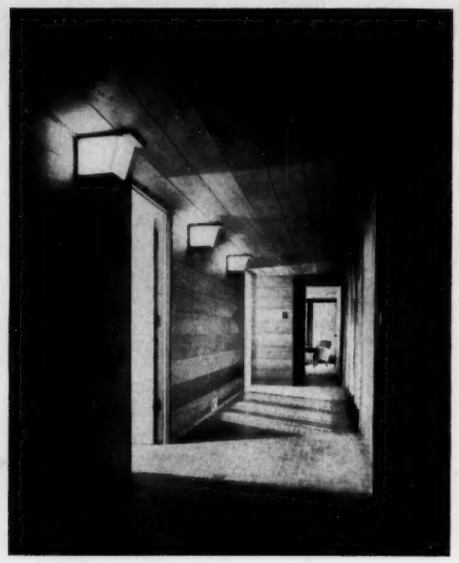
The almost brutal overhangs, supported on glass walls, which Harris has used in this house are no longer remarkable; today we build with ease what once would have been impossible. It is curious that the landscaping (for which Harris was not responsible) has been allowed to help the house so little. Almost the only lawn is concentrated in Garden No. 1.



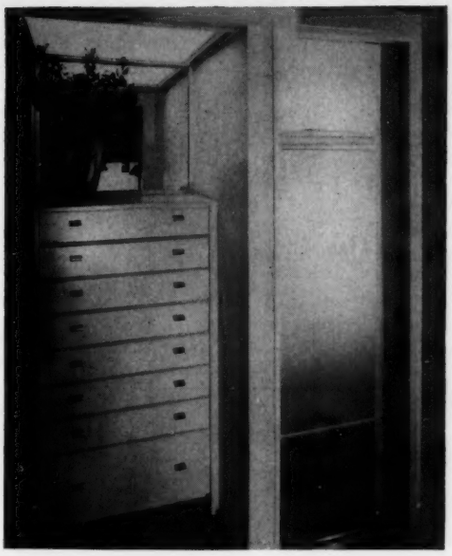
Section—Scale: $\frac{1}{16}$" = 1'-0"

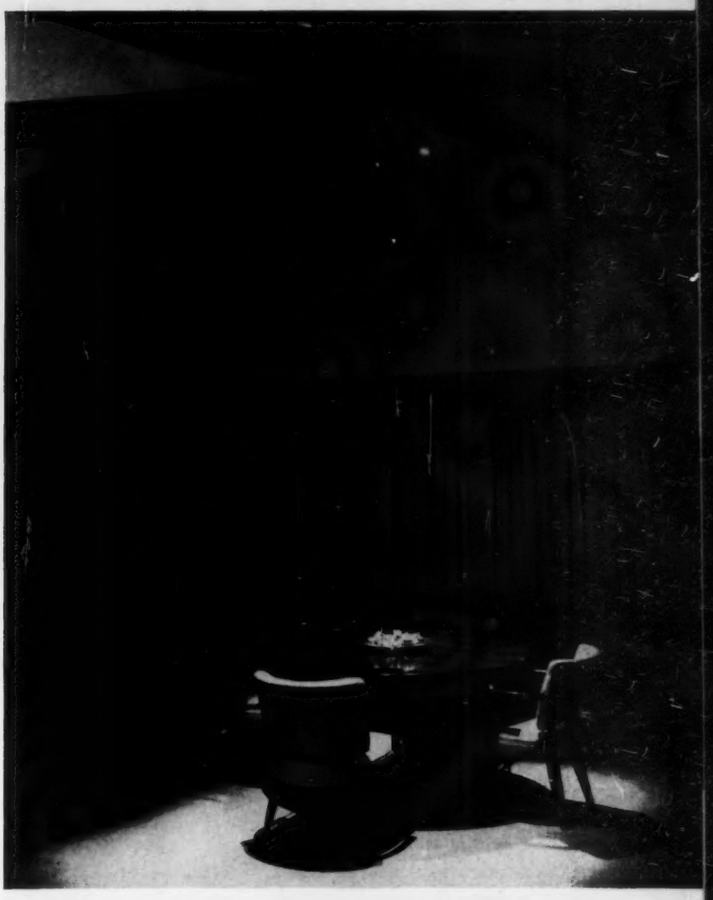
Above is the living room end; below, the garage end, of Garden No. 1. View at right shows that, seated in the garden, one can have a view through the living room over the ocean. The apparent obstruction in the upper view is a hinged back for the settee by the fireplace, which can be swung back out of the way. The pool, not shown on the plans, was originally intended to be part of the living room terrace.



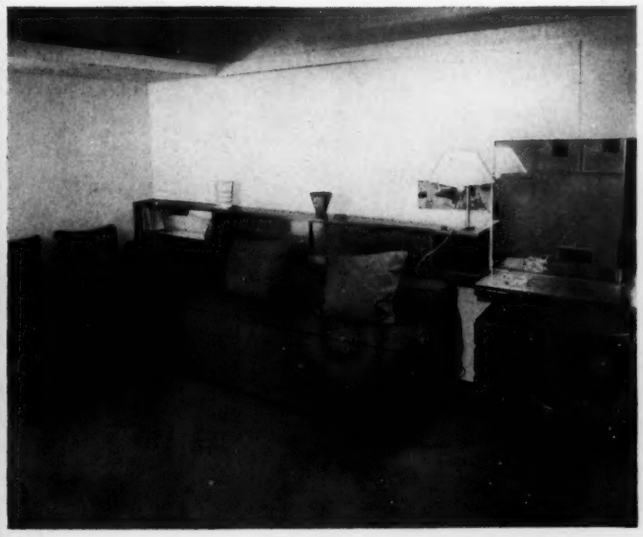


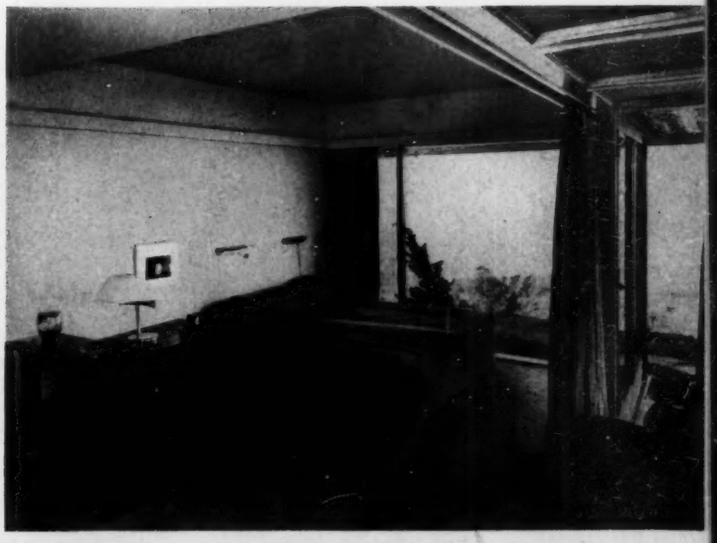
Above are three views of corridors in the house; left and center, entrance walk on the north side; right, gallery from bedroom suite to living room. Below is the three-purpose living room, with one area for lounging, another for music, and a third, shown at far right on the facing page, for dining. It is unfortunate that the photographer drew the curtains across the clerestory windows; reportedly, this device affords even, softly-diffused natural lighting.





Above is a built-in cabinet in one of the dressing rooms; at right, top to bottom, dining area, principal bedroom, and kitchen. The round table in the dining alcove can be expanded into a curved table seating numerous guests. Spotlights concealed in the ceiling light the table and the food without glare; diners need not look at light sources.

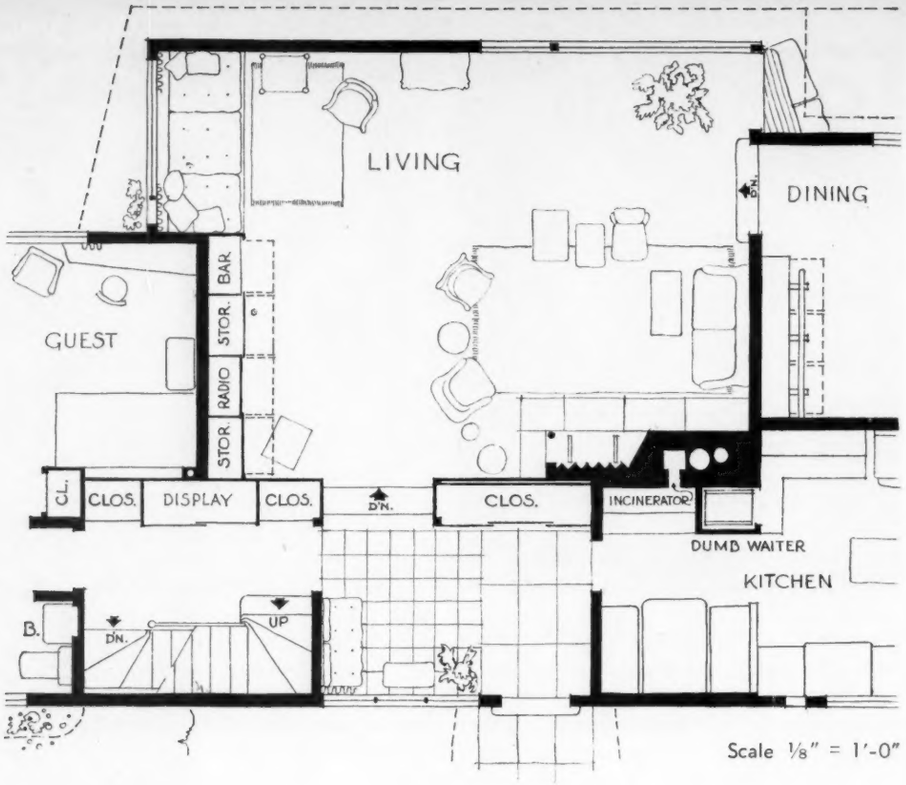




Immediately above is shown the studio. Furniture in this and other rooms was either selected by Bromberg in consulation with the owner, or specially designed.

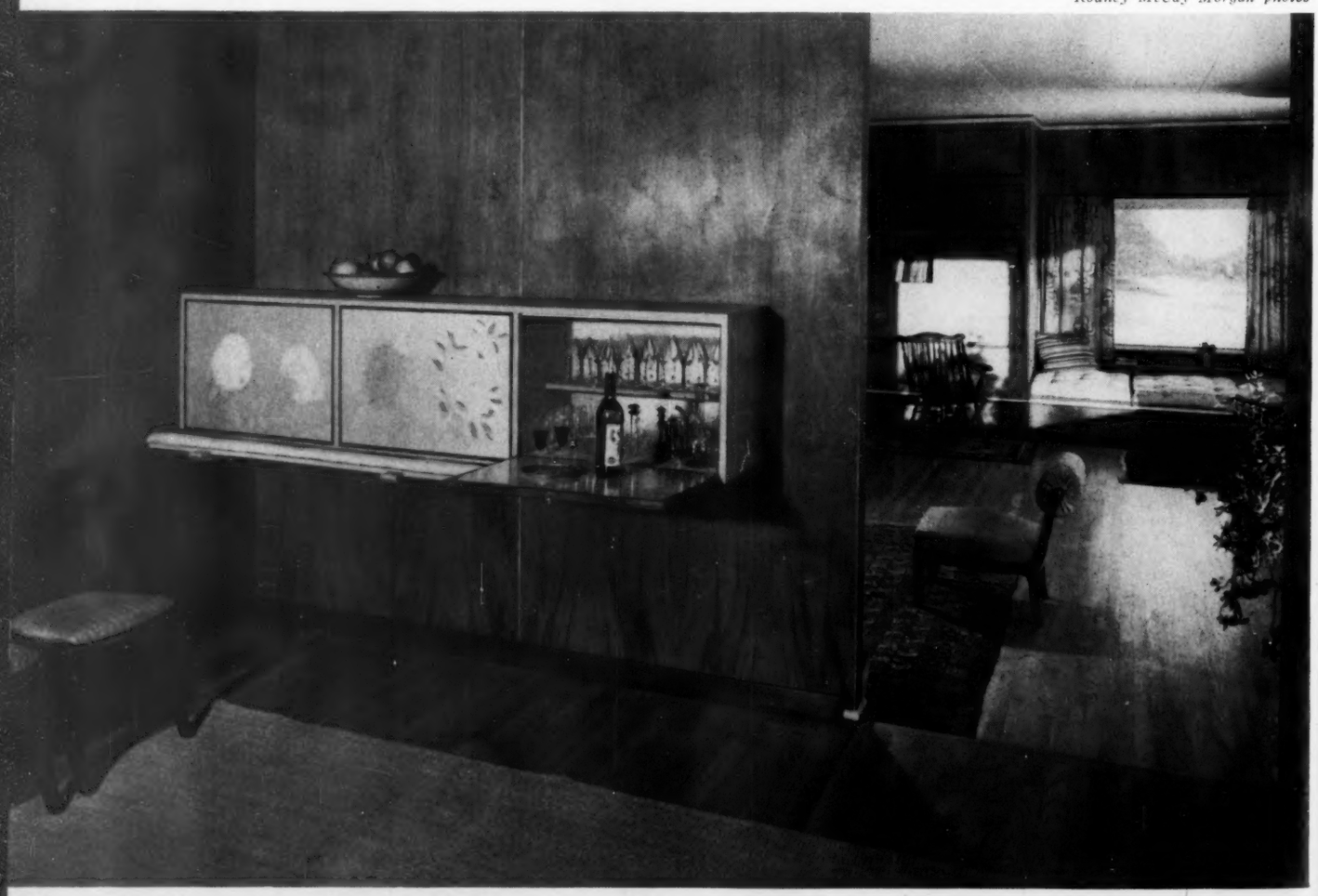
One matter has undoubtedly escaped the attention of most readers, as it did the Editors'. This is the fact that, to follow grades, the house is actually built in three levels. Bedroom wing is two feet above the entry; the living room side is two feet below. Nevertheless the roof line is almost continuous.

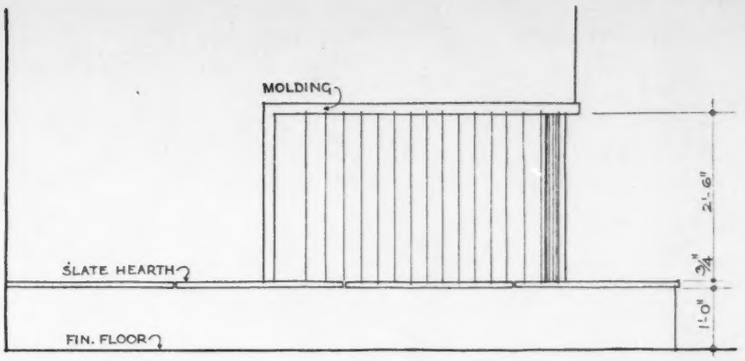
Ernst Payer, Architect



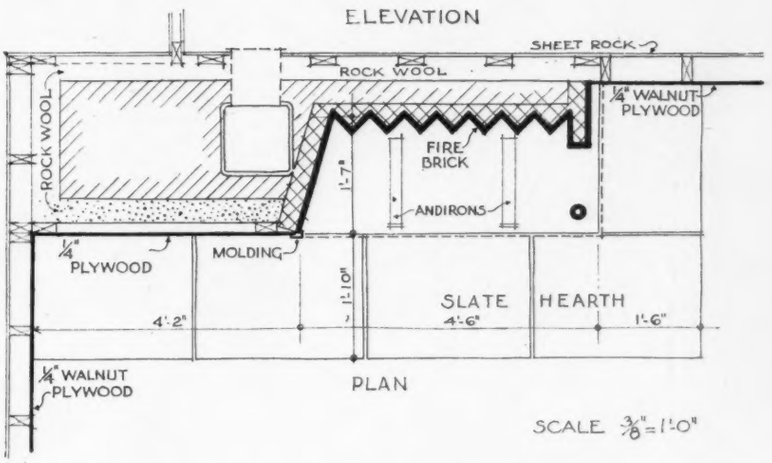
Ernst Payer, in his own house in Morristown, N. J., has applied experience gained in designing several houses on which accurate time and materials checks were kept. Here, interior surfaces are dimensioned to a modular unit which accommodates full-sized sheets of plaster board and plywood. Much of the built-in furniture is of plywood; closet walls are a single thickness of plywood. Rooms are dimensioned where possible so that standard framing will support 4-by-8-ft. sheets for finish walls, ceilings, and subflooring. Walnut plywood is used for dining and living room walls, is V-jointed, glued to plywood strips tacked to studs. Ceilings are gum plywood with special V-joints which align with wall joints.

Rodney McCay Morgan photos





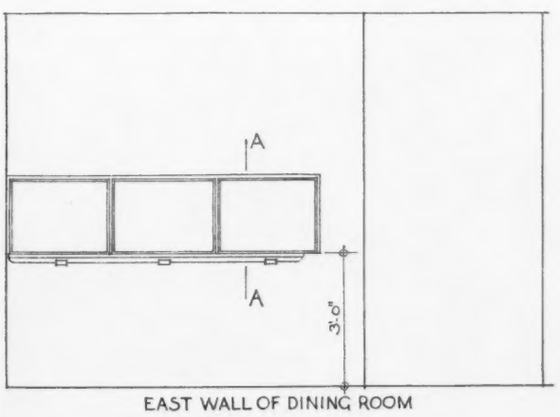
ELEVATION



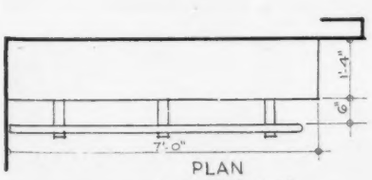
PLAN

SCALE 3/8"=1'-0"

Below are details of the dining room cabinet; above are the living room fireplace wall, covered with textured plywood, and an unusual fireplace design. The latter has a back of bricks laid diagonally. The corrugations thus produced, Mr. Payer states, prevent ashes from choking the fireplace, help to organize the draft, and diffuse heat more evenly than the conventional flat surface. After further experimentation, he believes that the two end courses might better be laid flat. The textured plywood is finished with one coat of gray pigment, toned slightly with green, in much oil. This was wiped lightly and given a coat of dull varnish which is hardly visible, but makes the wood easy to keep clean.

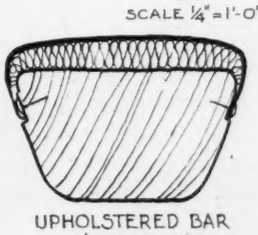


EAST WALL OF DINING ROOM

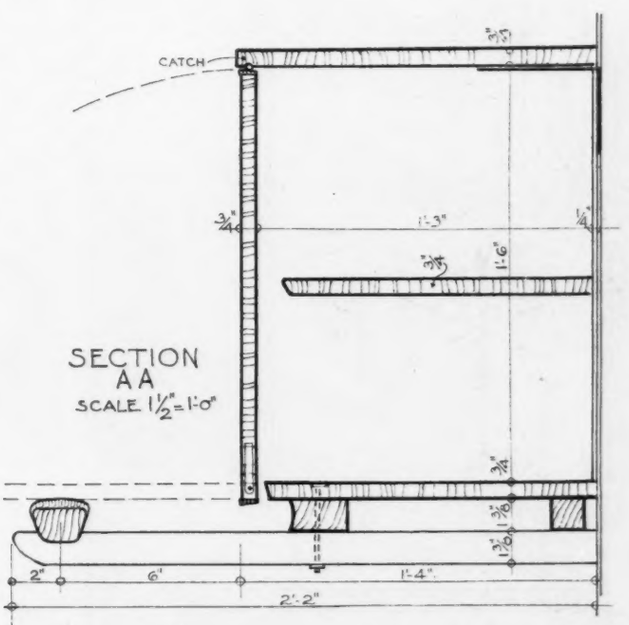


PLAN

SCALE 1/4"=1'-0"

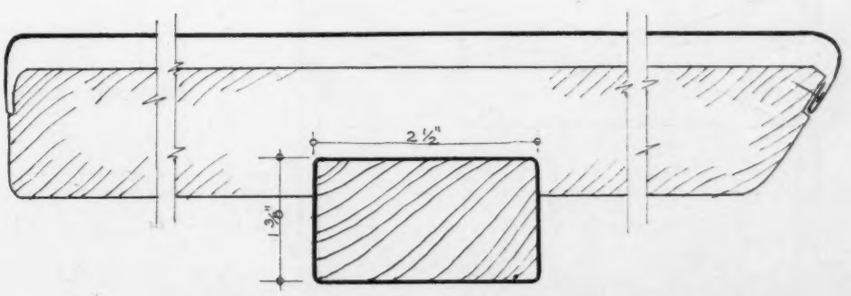


UPHOLSTERED BAR
1/2 FULL SIZE

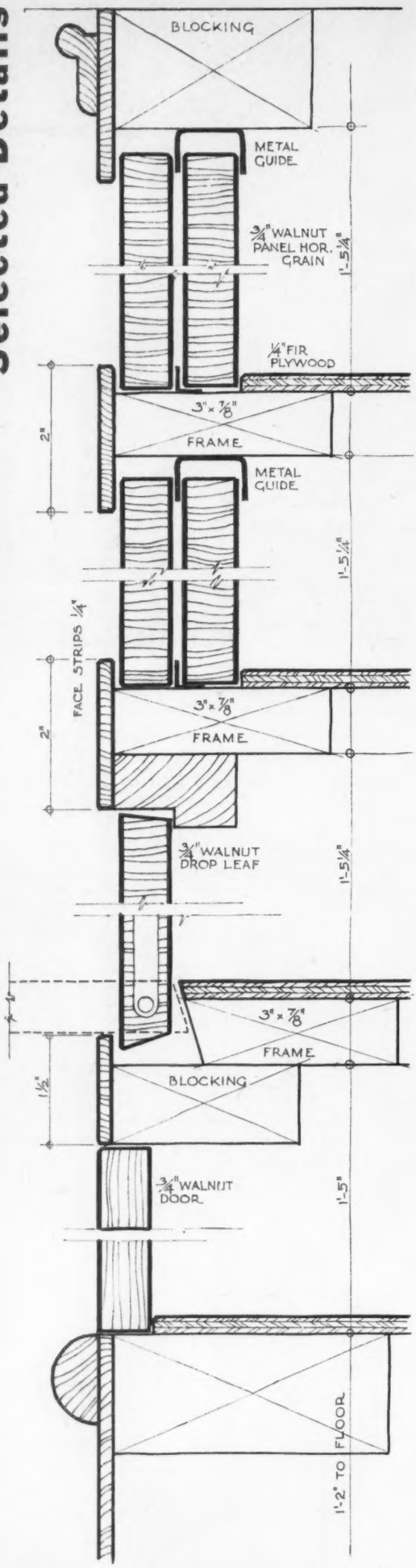


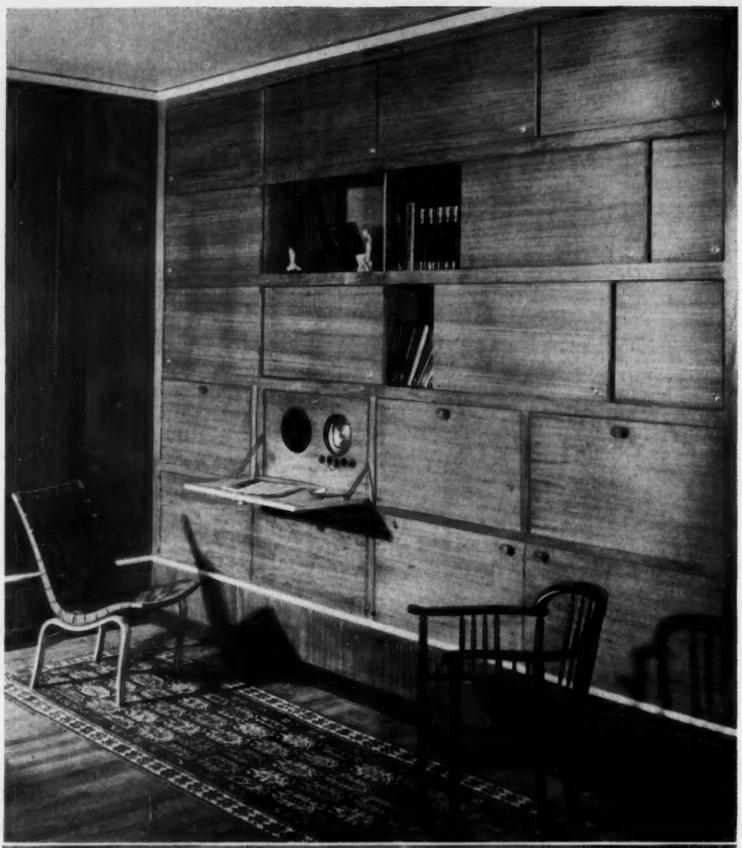
SECTION
AA

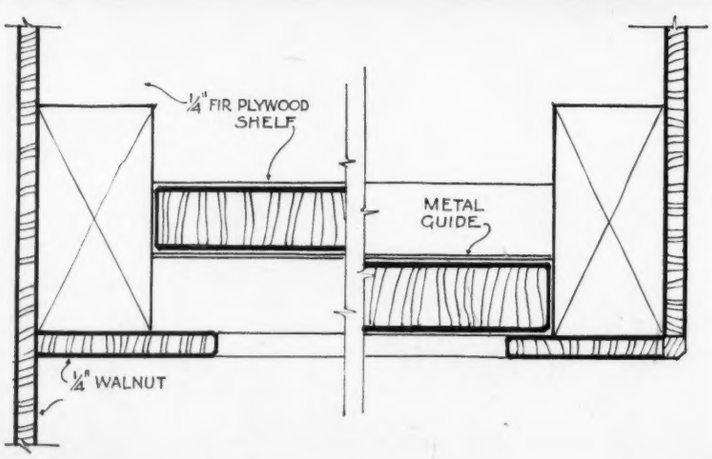
SCALE 1 1/2"=1'-0"

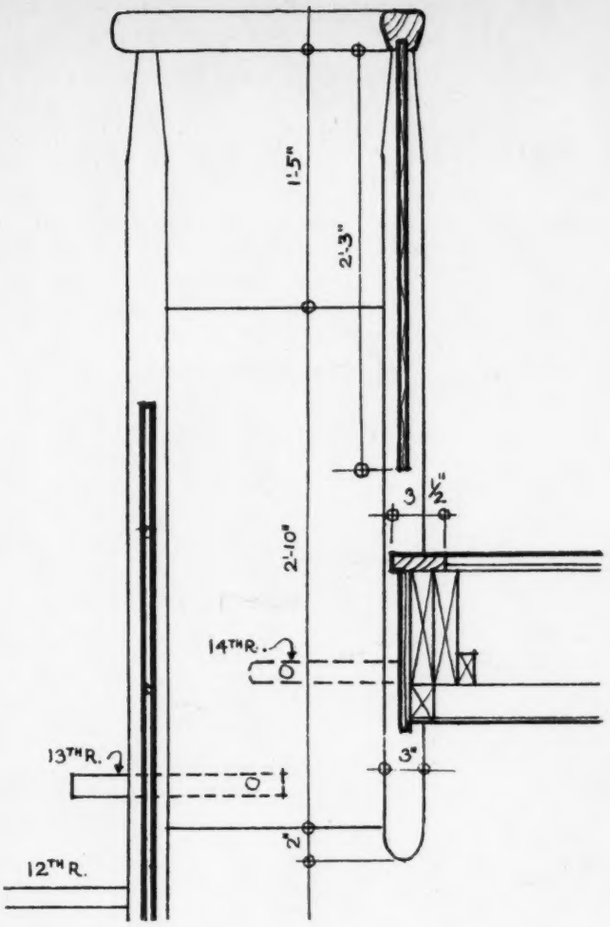


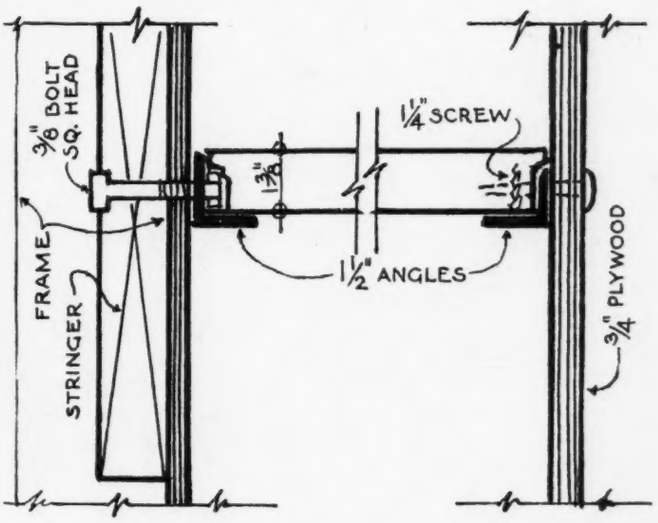
Selected Details

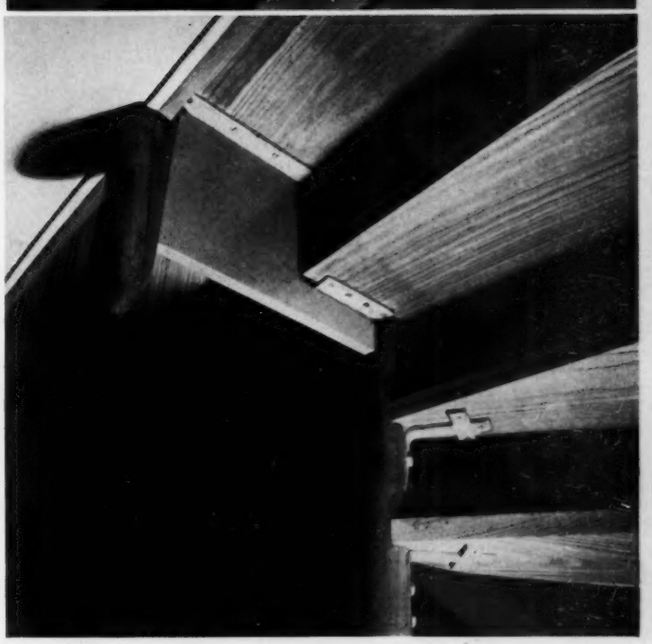


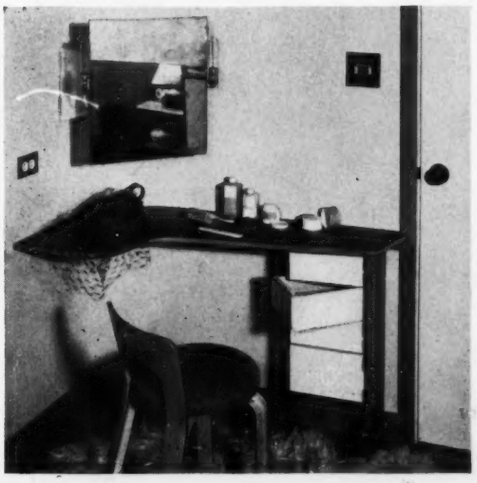


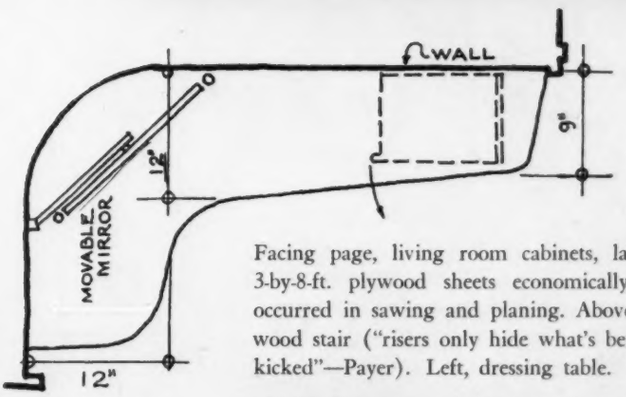








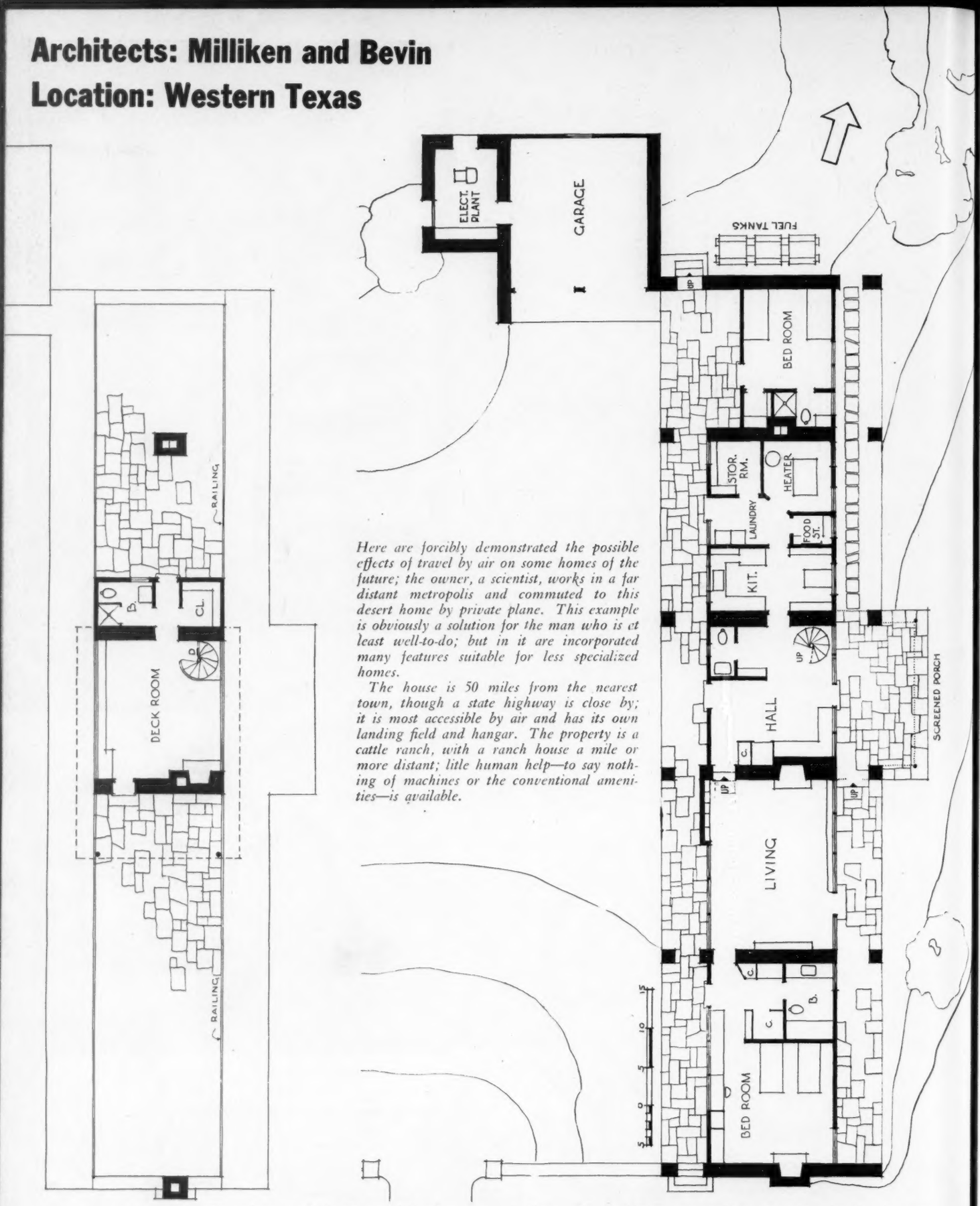




Facing page, living room cabinets, laid out to use 3-by-8-ft. plywood sheets economically. Only waste occurred in sawing and planing. Above, riserless plywood stair ("risers only hide what's beneath, and get kicked"—Payer). Left, dressing table.

Ernst Payer, Architect

Architects: Milliken and Bevin
Location: Western Texas

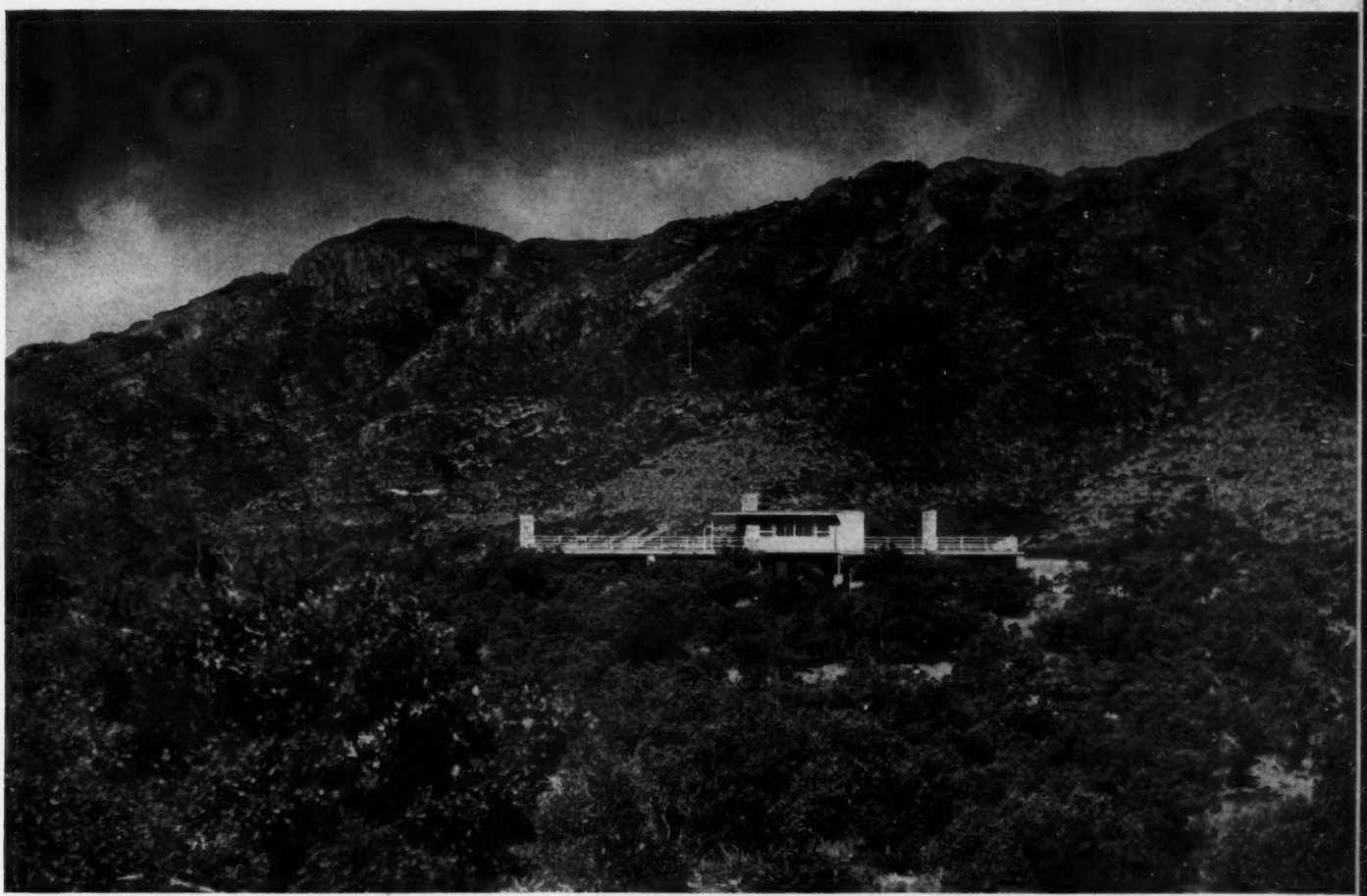


Here are forcibly demonstrated the possible effects of travel by air on some homes of the future; the owner, a scientist, works in a far distant metropolis and commuted to this desert home by private plane. This example is obviously a solution for the man who is at least well-to-do; but in it are incorporated many features suitable for less specialized homes.

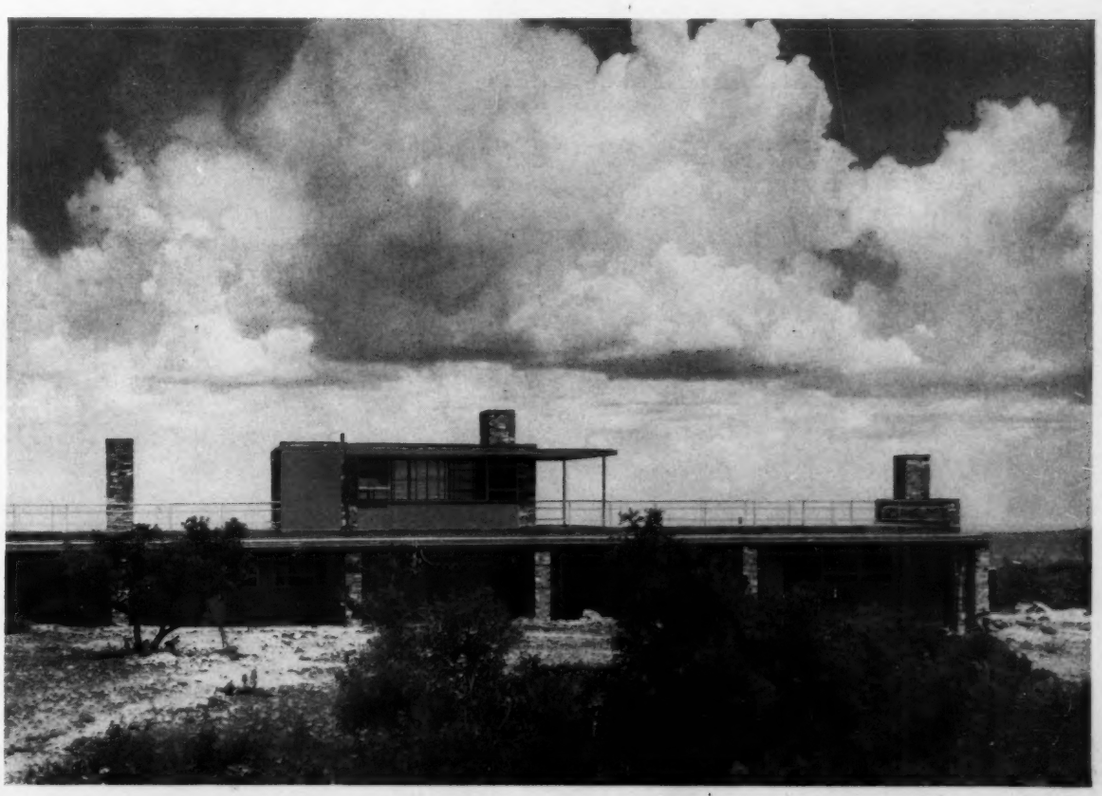
The house is 50 miles from the nearest town, though a state highway is close by; it is most accessible by air and has its own landing field and hangar. The property is a cattle ranch, with a ranch house a mile or more distant; litle human help—to say nothing of machines or the conventional amenities—is available.

The plans—and details on following pages—indicate the specialized construction adopted primarily for two reasons: fire hazard, and the very strong winter gales. No wood is used in walls, roof, or floor; only the outriggers which shade the windows are wooden. Also visible in the plans is the power unit, operated on butane gas, which is also used for cooking and refrigeration.

A long low house seemed to fit the terrain best, and afforded the opportunity of designing a structure consisting of transverse masonry bearing walls with light steel joists and steel studs between. The result is rather ship-like; but the problem stopped short of complete analogy, and, the architects being honest, so did the solution. For best air, light, and view each room has east-west exposure. Winds come from the southwest.

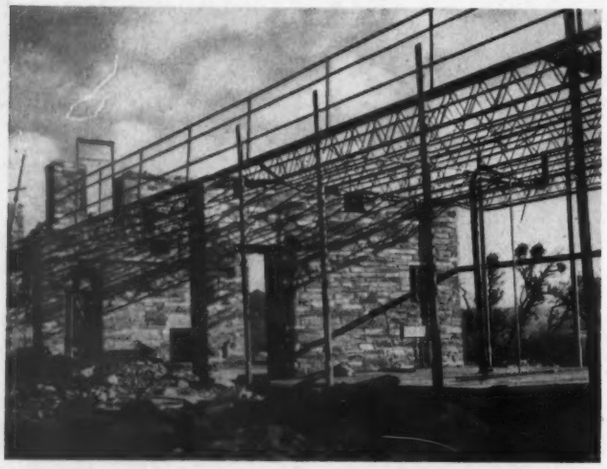


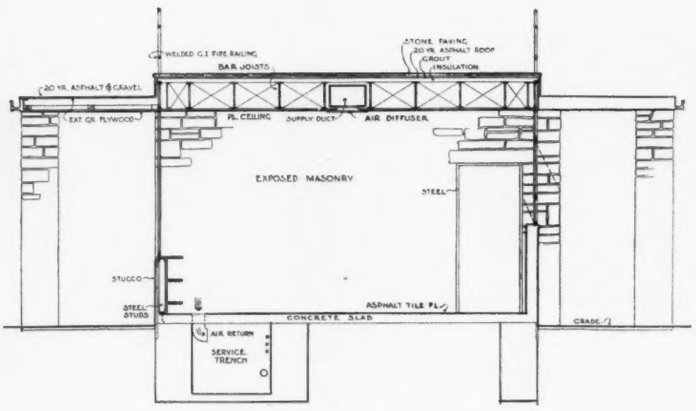
About a mile west of the house the Guadalupe Mountains rise nearly 10,000 ft. To the east is the open Texas plain. Wherever water runs there is dark green foliage; the hills are gray gypsum; and the masonry walls of the house are of local limestone of a tawny color, in a wide range of shades varying from almost white to almost black. The stone cleaves nicely, with one edge naturally almost as perfectly square and true as though dressed. The stucco used on the steel walls is adobe color, the sash and doors warm white, and the principal door prune color.



Construction of Milliken and Bevin's Texas house is extremely simple. As much as possible of the open-web steel joists, studs, steel sash and frames, pipe rail, etc. was fabricated at the source because all materials (excepting stone and sand) and all labor had to be imported. The standard sizes and shapes used were arc welded on the site in less than one day.

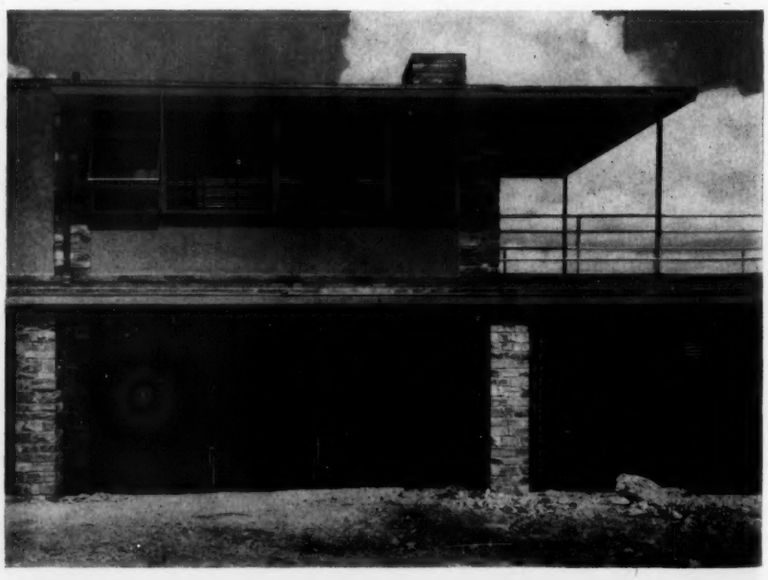
Upon this framework, structural roof slabs of insulating material were clipped in small units, exterior insulating board and self-furring metal lath were secured, interior steel walls and ceilings were plastered, exteriors stuccoed. The building rests on a concrete slab placed on earth. Lengthwise under the floor runs a service trench, 4 ft. wide by 3 ft. high, which carries supply and return piping, and also acts as a return plenum for the hot air heating system. The roof is of the 20-year built-up type, with local stone paving. Side walls are filler panels between the bearing walls, so it was possible to place openings wherever the scheme required; the east wall of the living room is entirely glass above the 2 ft.-6 in. high bookcase. The warm air supply duct is carried down the center of the ceiling.





The extreme simplicity of the house is clearly visible in this section. Here is the incombustible shell—steel, plaster, masonry, and concrete, with wood used only outside the house proper.

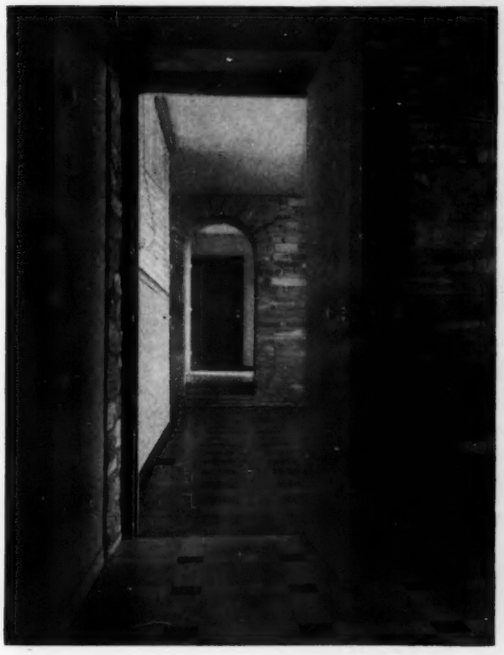
Even the circular steel stair, complete with stringer, center post, and handrail, was delivered in the minimum number of sections, ready to set in place and secured by welding. The lower of these two construction photographs also shows the nature of the local stone.



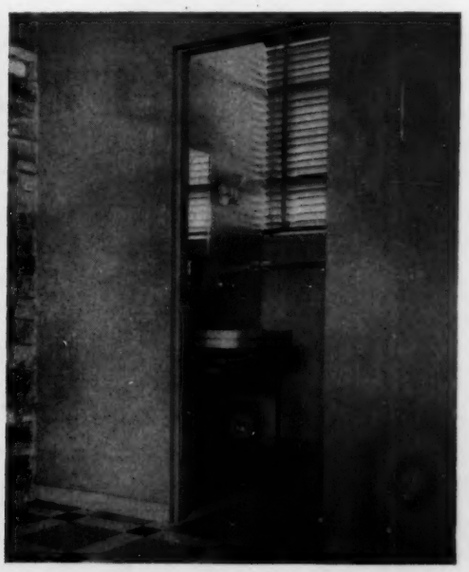
The days in this locality are warm and brilliantly sunlit; the nights always cool; air is dry and very clear. Note how the wide overhangs shade the walls when the sun is at its height, as when this photograph was taken.

The deck room, with its roof projecting widely to the south, can serve either as a hobby room or an extra bedroom.

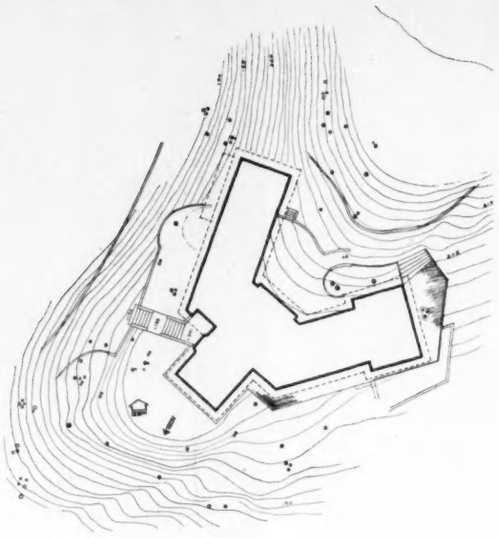
At left, looking North from the bedroom through the living room to the hall; at right, the deck room.



Below are, on the left, the kitchen; at right, a bath. Perhaps the architects accepted standard materials, perhaps selection was somewhat limited by materials available (the house was completed just under the deadline of the now famous "Stop-Building" order); at any rate, the choice of patterned tile layouts for the floors seems curiously out of harmony. Ordinarily a small item, this becomes highly important in such simple interiors.



Architect: Gardner A. Dailey
Location: Marin County, California



There is much speculation about the sort of houses that will be built after the war. Some prophets wax popeyed over visions of a fantastic future fabricated out of the monstrous designs even now being dreamed up by popular magazines and advertising "artists." Others pessimistically picture a complete nostalgic reversion to the past with a continued lazy adaptation of period styles.

Of course, neither extreme will generally prevail. Our guess is that there will still be plenty of mediocrities among the houses of the future (a sad thought that need not, however, be too depressing except to the incurable optimist). The really encouraging fact is that there have emerged, during the war years, increasing numbers of architects who, somehow, out of the chaos of the times, have developed a genuine sense of fitness and a conception of architecture as a living art—for living people.

"It takes a heap o' livin'," sang Eddie Guest, "t' make a house a Home." But there are different levels of achievement in all fields and he might have added something to the effect that the degree of perfection to be attained depends not only on the quantity—and quality—of the family life that goes on within the walls of the house, but also upon the tangible and intangible merit, architecturally speaking, of the environment provided by the house and its setting. In other words, it takes a heap o' thinkin' by a good architect to make a house in which an intelligent and appreciative family can immediately and permanently feel at home.

"Boy meets girl," and the inevitable happens—but not all the resulting matches are equally happy, nor their progeny equally well-favored.

"Client meets architect," describes another common situation, containing as much uncertainty. Of the ensuing spiritual unions, quite as large a percentage, we dare say, are incompatible and quite as small a number ideally perfect as in the case of conventional marriages. And we feel safe in claiming for the architectural off-spring as high a ratio of dullness to brilliance as in the biological analogy. It seems probable that the architecture of houses is no worse and no better than the members of the human race at whose behest it is born.

When the architect-client team is mismated, all sorts of unsatisfactory things may happen. The direction of departure from perfection depends, as in marriage, upon who wears the figurative pants.

Sometimes the self-assertive client dominates, while the unhappy architect, in order to hold onto the job and the commission, yields his prerogative of controlling the design. Some such reason must lie behind the many pretentious, self-conscious, bastard houses that dot the land.

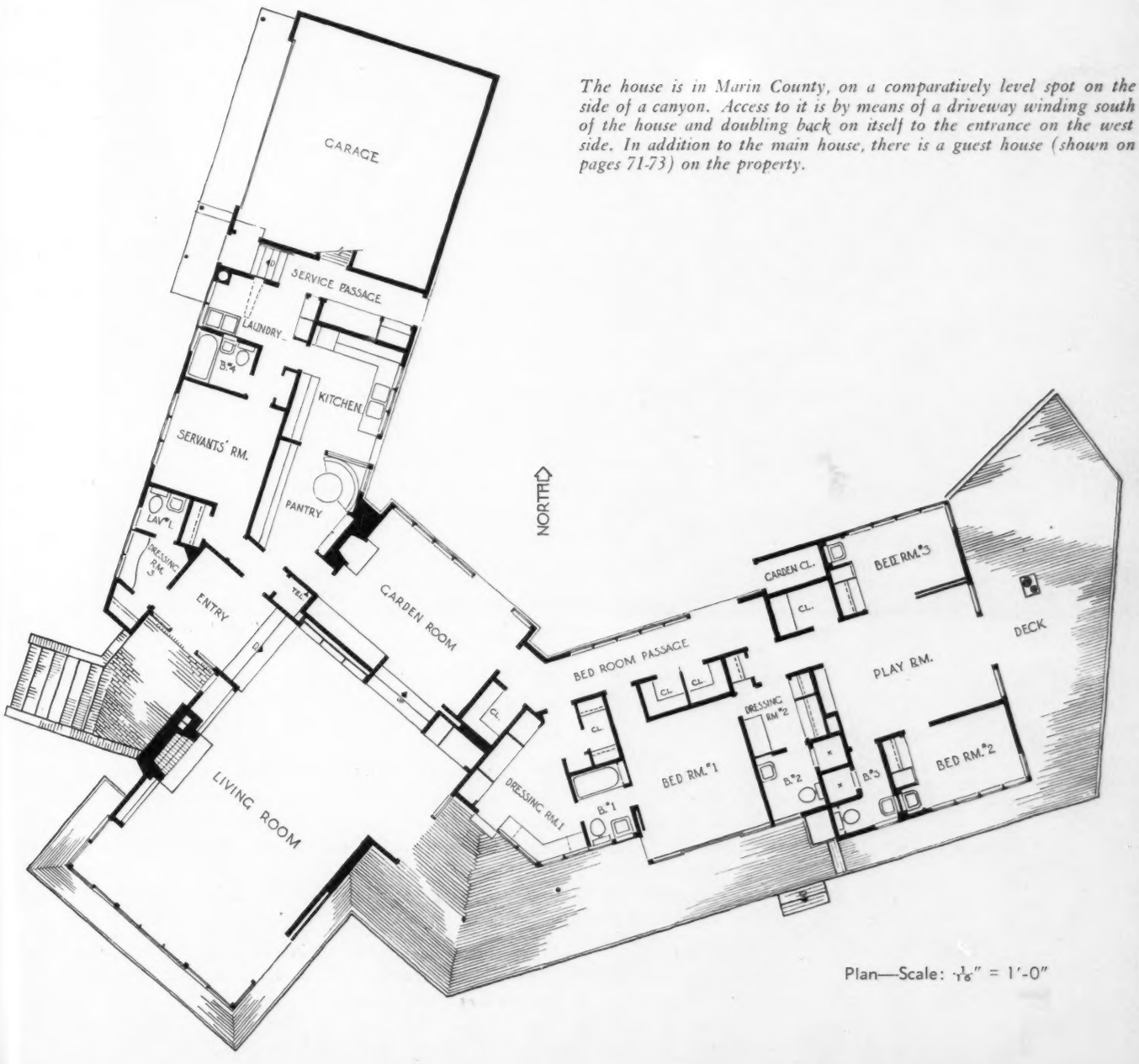
On other occasions, a dominant architect, full of creative zeal and bent upon expressing some philosophical idea that interests him above all else at the moment, forces the personality of his shy and trusting client into the background while he creates his masterpiece. He may satisfy the material needs of the family, surely and well—yet he compels its members, when the house is done, to live ever after with the uneasy feeling that they remain the guests of genius, in place of having a home of their own.

As to the cases where the two parties to house-creation are mutually agreeable, smugly satisfied with being correct but dull, we need say little. As long as they remain complacent in their mediocrity, let us not disturb them. They do not make, nor do they perhaps claim to make, any contribution to the advancement of architecture.

In our quest for creative progress, we are most properly concerned with the finest examples of what perfectly coordinated architect-client association can produce. When a gifted and imaginative architect, sensitive to form and color and pro-

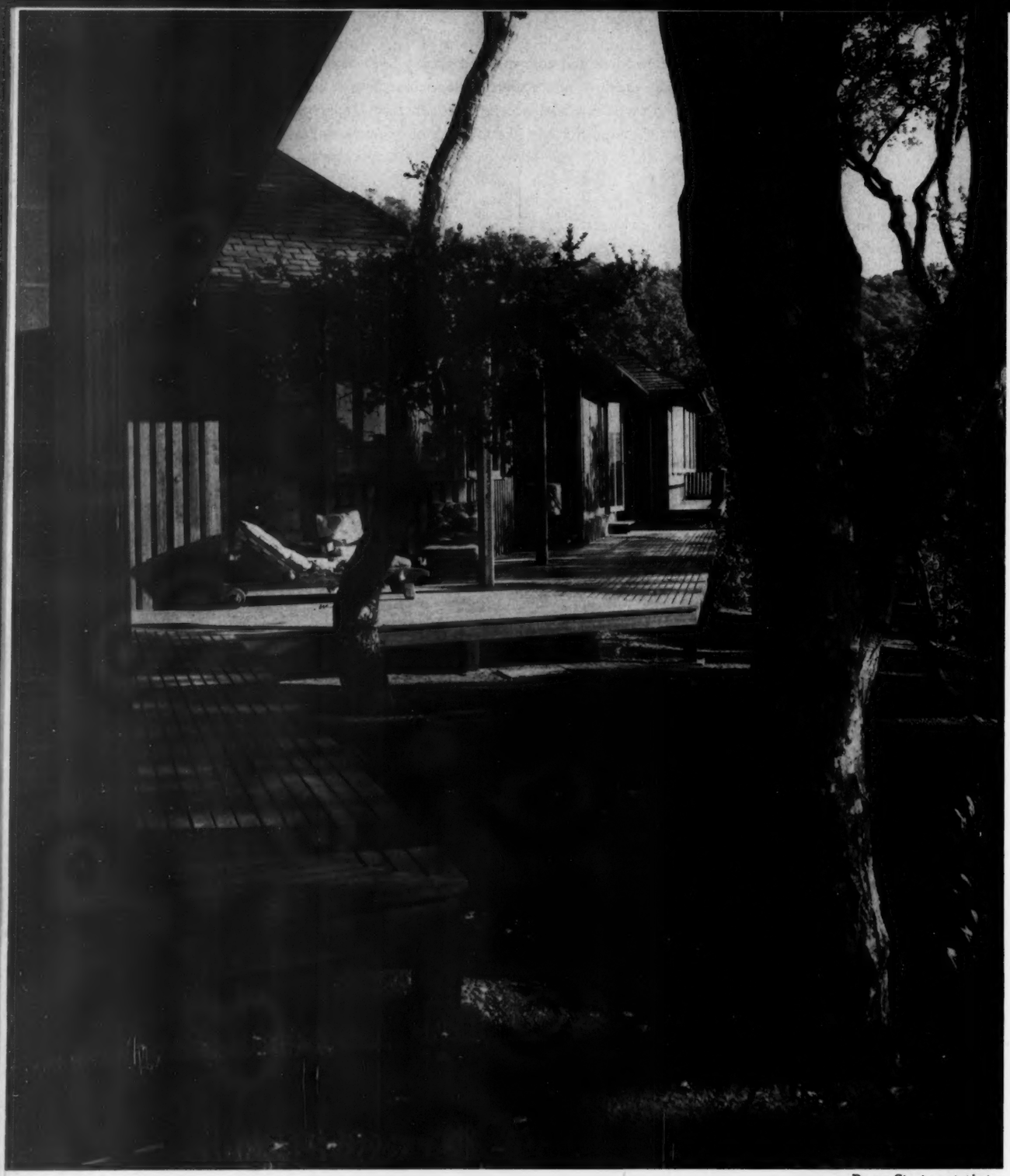
portion and surrounding nature, aware of the possibilities of freedom and enjoyment that distinguish modern living from that of the restricted past, encounters a client who is equally sensitive and understanding, something rather fine in the way of a house is likely to result. The houses we have carefully selected for presentation this month approach this ideal more nearly than most. Every one of them has that quality of design that we like to think of as likely to guide the best postwar trend. In every one the designer has faced and solved, simply and honestly, its inherent problems of planning and construction. None are exhibitionistic; each has individual character.

Of these houses, the one by Gardner A. Dailey, herewith, is to us the most completely satisfying. To begin with, it fits naturally and beautifully into its site on a California hillside overlooking a canyon. Its form is dictated in part by the contours, which it follows gracefully without forcing. The magnificent setting is made to seem a part of the design itself, by means of the skilful disposition of indoor living spaces and their outdoor extensions, to take fullest advantage of the available views. The materials of both exteriors and interiors are well chosen to be unobtrusive, and to blend with the surrounding woodland and the furnishings. A sense of friendly shelter is given by the low, wide-swinging roof while from within one is invited to look outward through well-placed window areas. No stunts of decoration distract attention to the interior background, yet everywhere one looks there is satisfaction to be found in sensing the qualities of space and of surface for which the designer has evidently an unerring instinct. The house has been thoroughly thought through as a place for warm, rich, natural living—a modern Home. One feels that the client that could call forth from his architect such a result must be understanding and appreciative enough to be worthy of it.



Plan—Scale: $\frac{1}{16}$" = 1'-0"

The house is in Marin County, on a comparatively level spot on the side of a canyon. Access to it is by means of a driveway winding south of the house and doubling back on itself to the entrance on the west side. In addition to the main house, there is a guest house (shown on pages 71-73) on the property.

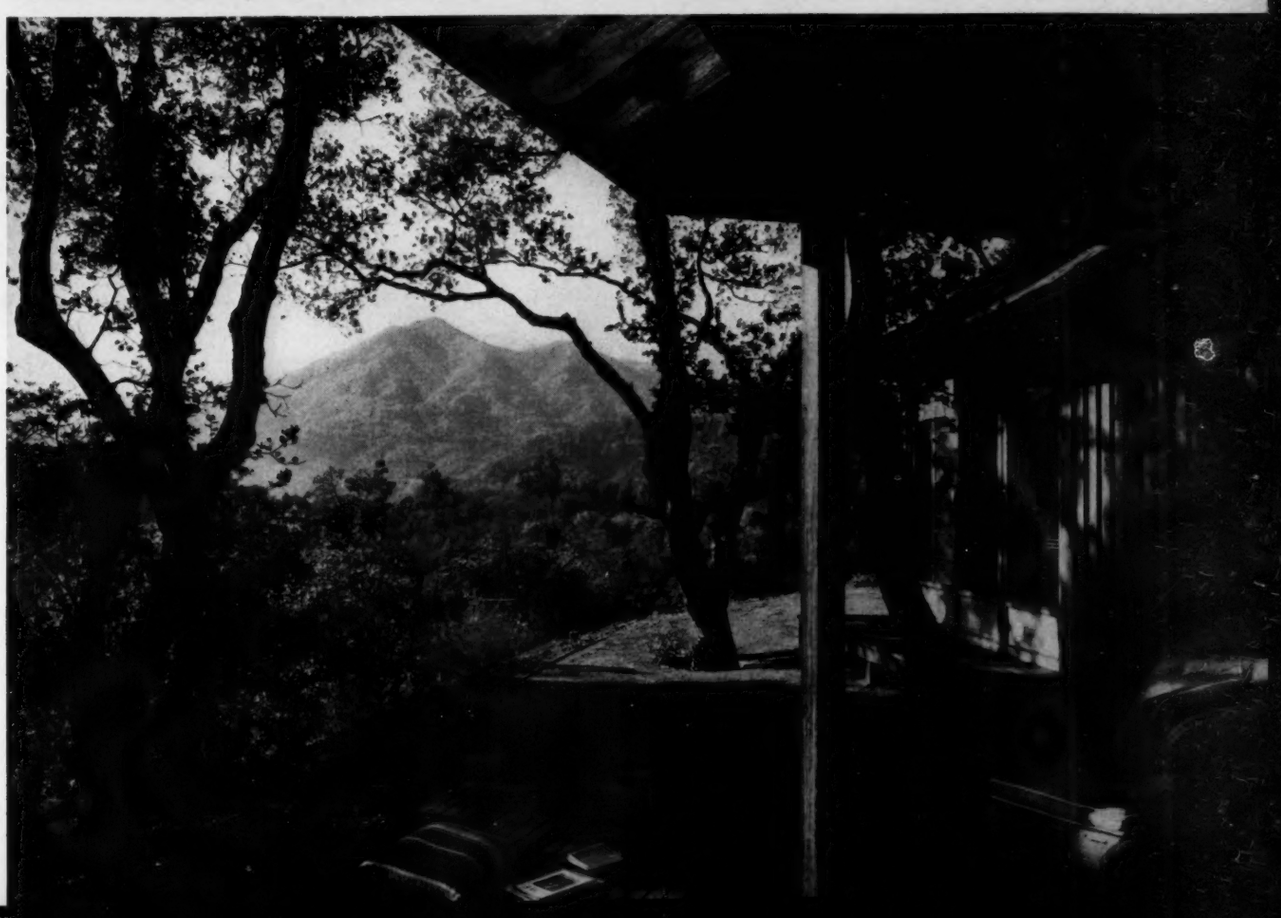


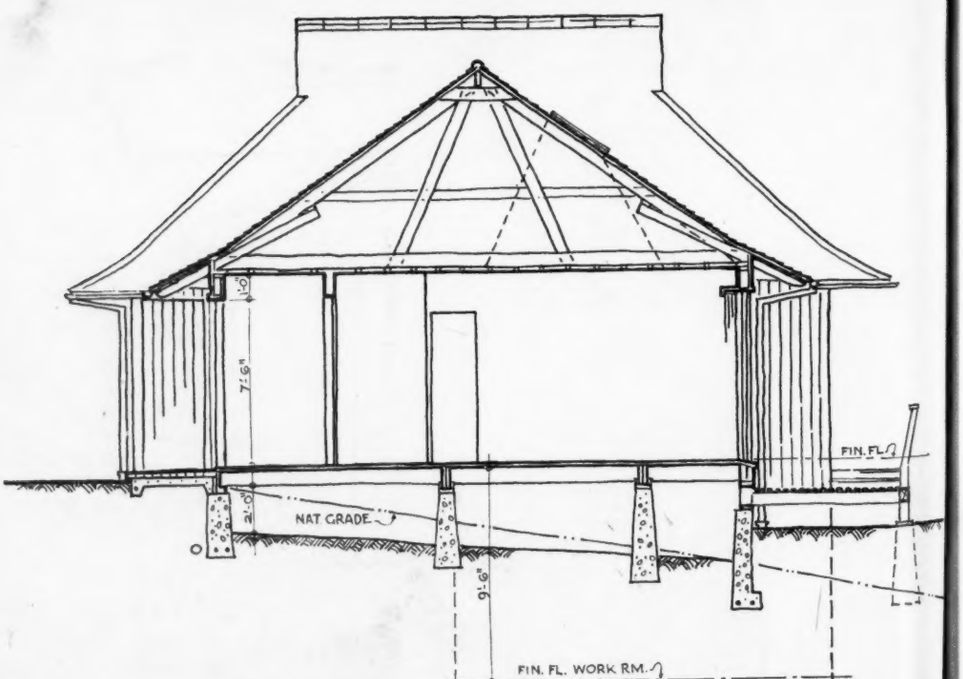
Roger Sturtevant photos

There is a peculiar essence about this house of Dailey's. In part it is due to superb craftsmanship, evident in every detail of construction. Part of it comes from a thorough naturalness of treatment which transcends style—architecturally speaking, the house has no style. Partly it stems from complete mutual understanding between architect and client. Gardner Dailey hasn't said these things explicitly. When asked, he said something non-committal, smiled, apparently felt uneasy, and walked away as soon as he politely could. How could he say in so many words how he had gone about so personal an undertaking as designing a home? But the evidence is here before us, as accurately displayed as photography permits.

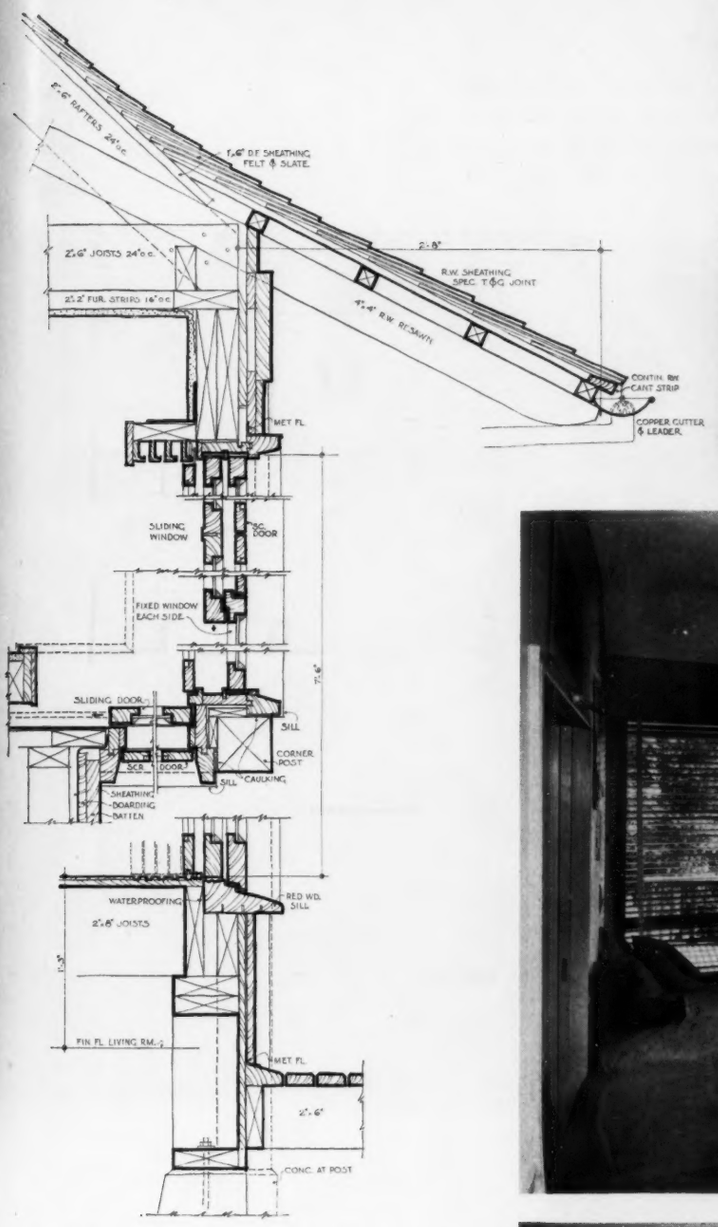
In other hands the formal Y-shaped plan might have been stilted, or resulted in a horrendously symmetrical series of elevations. But this house was designed to be lived in and close by; it cannot be viewed as a whole from outside. It is buried in trees; it sits on a hillside. It is not so long since a sloping plot meant to the up-to-date American architect, who, with his fellow Americans, loves slogans, a "split-level" or "stepped" house. Here sham or even justifiable tricks were unnecessary; the view provides the drama; the house is for living.

Another cliché to which the prewar, "thinking" architect subscribed concerned tying the house to the ground. In many cases reliance was placed upon vast expanses of roof sweeping from a high ridge almost to grade. This house fits its setting well. It is surrounded by a platform on stilts—a device usually scorned, but now used with that designed simplicity which is hard to achieve. There is an Oriental feeling here; the platform and the rambling house might be Polynesian.





Section—Scale: ⅛" = 1'-0"



Wall Section—Scale: ¾" = 1'-0"

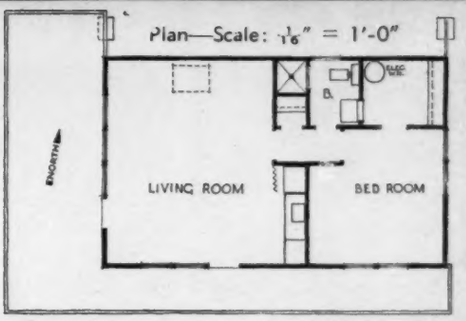
On the facing page are, top to bottom, the living room with its view of Mt. Tamalpais, and the bedroom corridor. On this page, top to bottom, living room looking toward entrance, children's rooms, and main bedroom. The wall section above illustrates construction of such sliding walls as appear in the bedroom photograph—another Oriental feature. Notice the delightful moiré pattern of light through the split bamboo shades in the living room.

The view below, comparable to that seen by a visitor strolling about the house, illustrates the finesse with which Dailey has combined materials, forms, and environment: Redwood, metal screening, glass, the pattern of light through foliage, overhanging eaves. The composition is as happy as though a painter had studied it carefully. Compare it with the photograph below.

Rudofsky photo

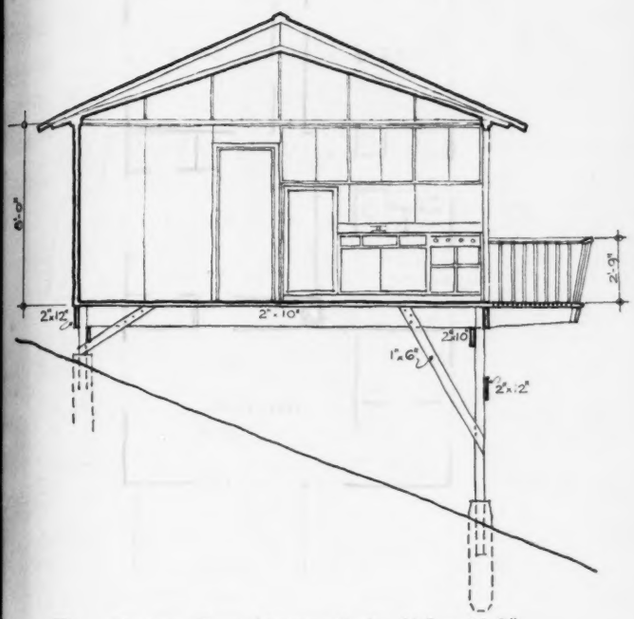
This view is taken from a spot from which one seldom sees the house. It is perhaps the most unsatisfactory elevation; it seems as if banality might have reached the designer at last. The façade looks almost as if it came from an unarchitected subdivision; the almost Burmese roof may be an expression of a Dailey fixation. Roofs seem to fascinate him. In justice to the reader, it should be said that selection of photographs has resulted in eliminating from this presentation some of the less pleasing views. This was done on purpose. We see mediocrity every day; and in a series designed to give American architects an inspirational basis for designing houses after the war, the Editors feel justified in taking such a course.

Guest House

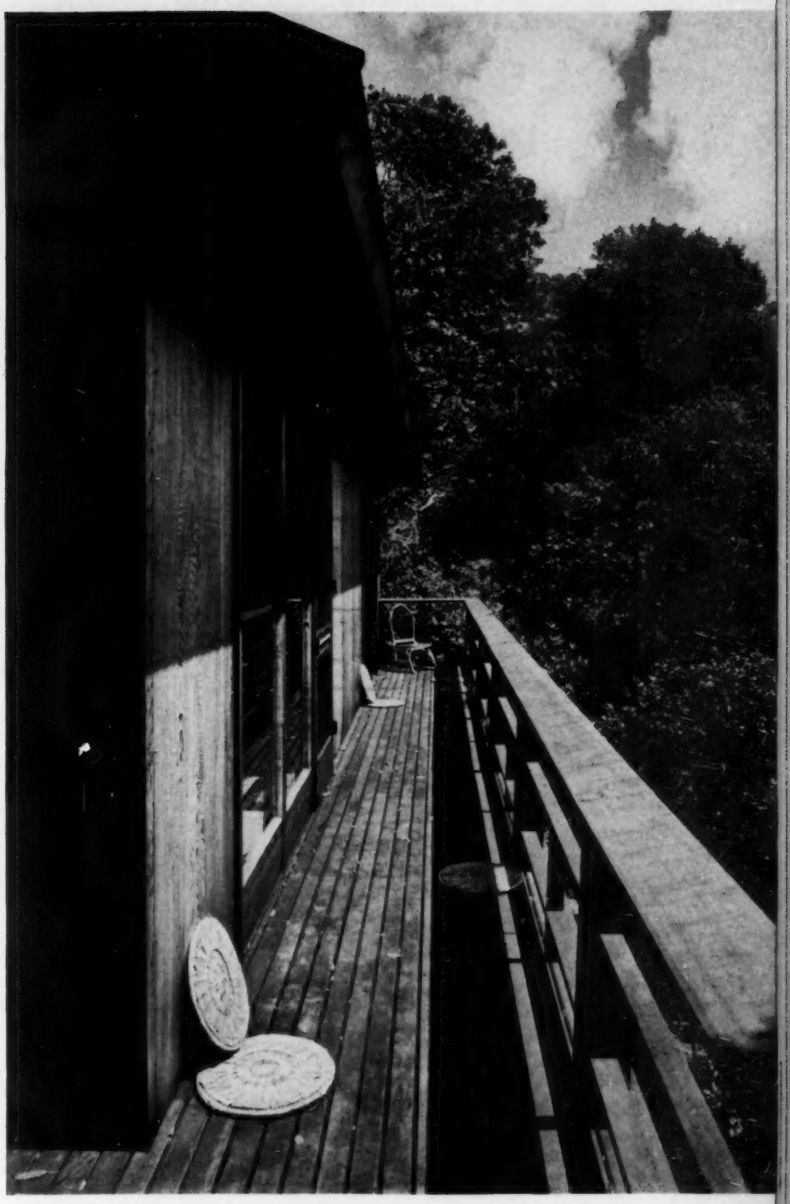


The Marin County house appears larger than it really is. To accommodate visitors, the guest house shown here was placed near by. It is another house on stilts, set well among the trees, with another type of Dailey roof. The two are compatible, yet different. But being a guest house, it can afford to be more playful, though that is not precisely the word. It offers the guest detachment, an eyrie among the trees; and into its design are incorporated, to even a greater extent than is true of the main house, the magnificent trees, the vistas, of the landscape. Maybe the fact that it is smaller, hence presents a greater chance to focus the attention upon detail and to achieve intimacy, has helped to make it almost outshine the main house.

At top is the living room of the guest house; at left, the bedroom. Even greater simplicity prevails than in the main house, yet the house is by no means barren.



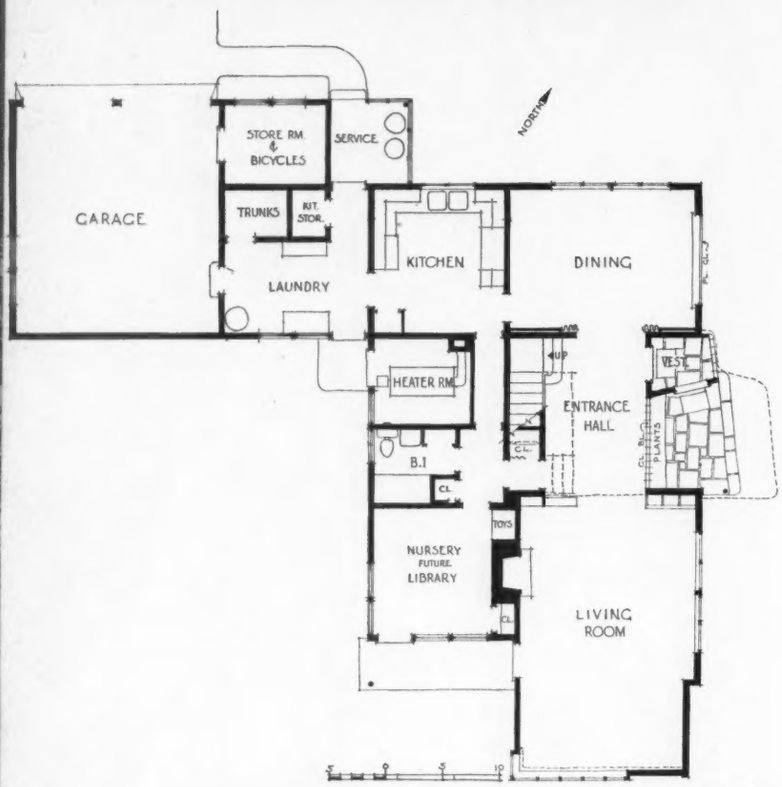
Section, Guest House—Scale: 1/8" = 1'-0"



On the long balcony pictured above, a guest—and often, we suspect, the owner—can sunbathe in seclusion. At right is the simple kitchenette; with the curtain drawn, the entire space is once more living room.

In this guest house no occupant could have claustrophobia. The light, yet substantial roof, carried out over the porch, shelters yet does not oppress; the expedient of carrying glazed transoms clear to the soffit, with a minimum of trim at the supporting posts, might be regarded as daring. But the view admitted, and the delicate sense of almost being able to reach through the transom and touch the porch ceiling, are important enough to make the observer forget the boldness of the conception. To those of us who look upon steam heated apartments with plush rugs as the ideal, the use of woven mats for floor coverings may seem too Spartan. Their texture and color was purposely chosen. They fit the life of the house.

Designer: Eleanor Pepper
Architect: George W. Kosmak, Jr.
Location: Princeton, New Jersey

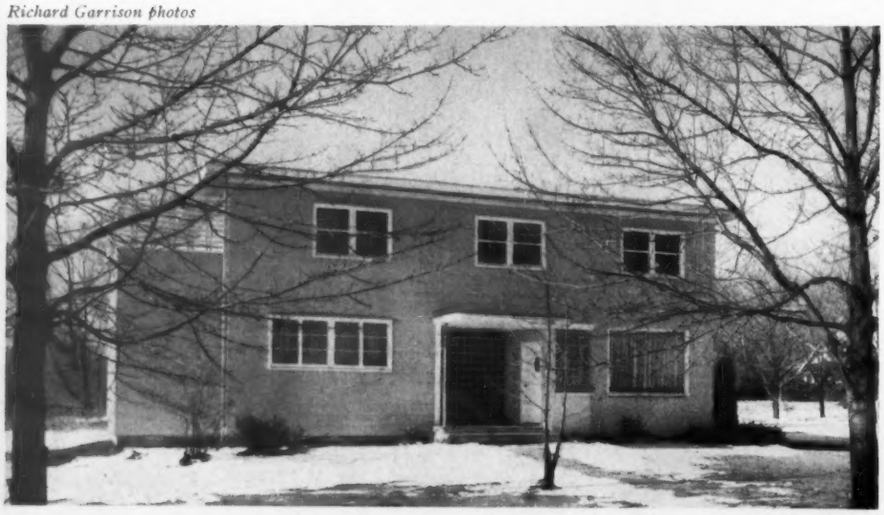


The almost conventional first floor plan was insisted upon by the owner, a Princeton professor, as requisite for conventional entertaining.

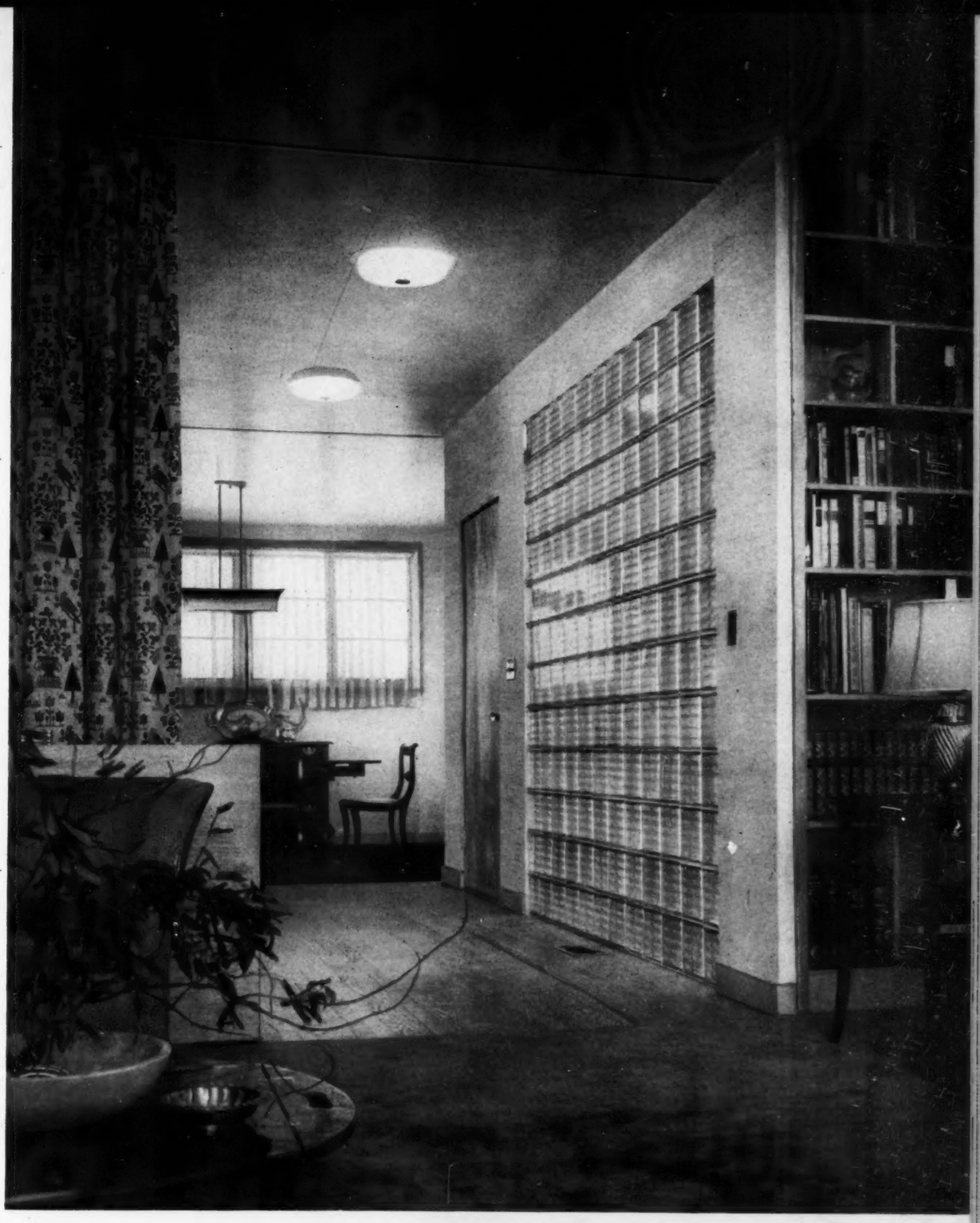
Children and nurse have segregated second floor quarters, but supervision is possible from sewing room or master suite.

This house was designed for a couple who had grown up in high-ceilinged rooms, and wanted summer comfort. A large family had to be accommodated, the conventional social life of a Princeton professor had to be taken into account, the climate is difficult in summer, and the owners definitely required non-stylistic design—rather a mixed set of premises upon which to proceed. Many design features were dictated by the hot Princeton summer. All upper windows are shaded and, when open, protected from rain by the wide eaves. The roof is insulated and ventilated. The first floor plan isolates the nursery-kitchen-baby's bath unit from portions for adult living. The nursery, with its large glass area, linoleum floor, blackboard, and toy closet, is eventually to become the Professor's study. The children's play yard is easily overseen from the kitchen. One feature which affects the character of the house is the use of windows with high sills and heads at ceiling level, a device for retaining privacy, particularly at night when the windows must be kept open. The conventional first floor arrangement of living areas is modified by omitting walls where doors might occur and carrying ceilings through continuously. A circular, detached screened porch, not shown in plans or photographs, is located west of the house to catch the slightest breeze, and is connected to the building by a covered walk.

Richard Garrison photos

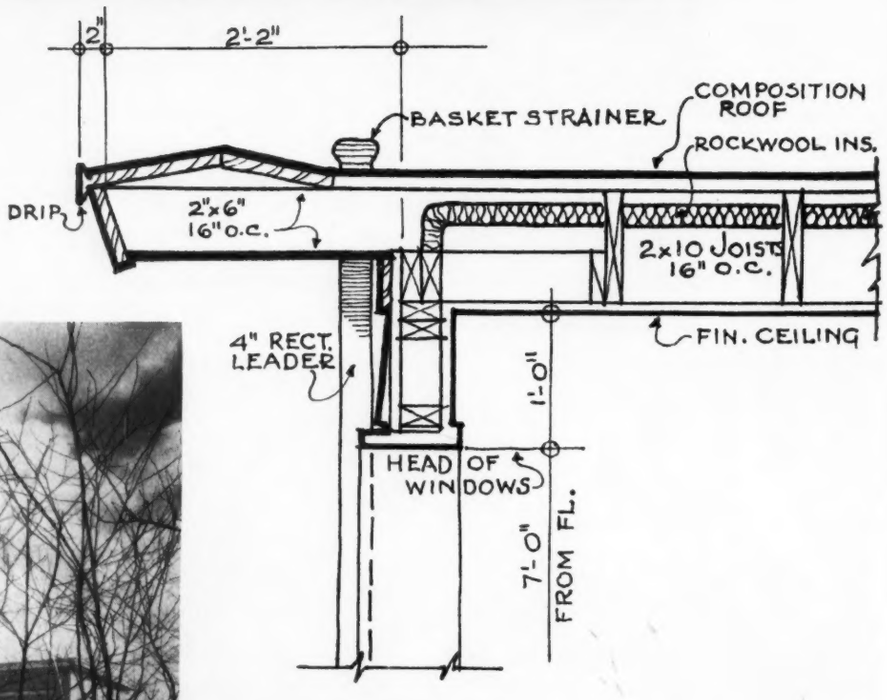


Exterior is faced with Redwood in a neutral gray color, with narrow white trim and a turquoise blue cornice soffit. Marquis soffit is stucco, terra cotta colored.



Living room window takes advantage of a view away from the street, admits sun in winter, has a drained, waterproof sill for plants. Double curtains are used in summer.

The wooden screen above has board louvers which admit air while shielding sunbathers; it will eventually support a wistaria vine. Eaves section (right) shows ventilated, insulated roof. House has recirculating, humidified hot air heat, with provision for future cooling.



Garage side of house. Cellar was omitted under whole structure, but space under house is ventilated.

Discussions on Urbanism

The Planning and Housing Division of the School of Architecture at Columbia University has established a study group, composed largely of architects, which is meeting weekly for sixteen weeks to hear the views of engineers, lawyers, economists, sociologists, public administrators, etc. on the problems of urban rehabilitation and to participate in discussions rising out of the questions developed. NEW PENCIL POINTS *is publishing monthly reports of the discussions and procedure, of which the following is the third installment. The second appeared last month.*

5 Population Distribution: Centralization vs. Decentralization, by Lorin A. Thompson, Director, Population Study, Virginia State Planning Board. Author of articles on relationship between population change and administrative planning.

Continuation of the author's discussion in the March issue in which he appraised future trends in population concentration and distribution in the light of historic trends as they relate to economic and technological developments.

Other factors such as governmental costs, taxes, and operating efficiency also must be considered. Consideration needs to be given to the relative efficiency of a plant located in a large metropolitan area as compared to one in a smaller center. Many large corporations within the last few decades have moved their plants from the original sites in the centers of cities to suburban, and even rural, areas. Creamer's "satellite" municipalities have sprung up in and around many of our large cities.

Factors which have motivated this movement have been largely economic; that is, cheaper land, more space, cheaper types of construction which are possible on low-priced land, equivalent transportation facilities, and so forth. Moreover, improvement in transportation facilities generally has made the development of suburban industry more desirable than was the case 20 or 30 years ago.

The composition of the population will also influence facilities needed for the development of cities in the future. For example, the changing proportions of people in different age groups, which may be approximated by following estimates taken from Thompson and Whelpton of the Scripps Foundation, indicate that in three decades our aged urban population will be more than twice its size in 1930; the group aged 40-64 will be roughly two-thirds larger than the number in 1930. In terms of facilities this means that there will be fewer children to be educated and a great many more older people to be employed or othrwise provided for.

Good planning and design must take account of these developments in preparing city plans.

We have become extremely conscious of the limited size of our population in conducting a global war. Declining population among school-age children has already been felt in many cities throughout the land. Prior to the war, increasing demands were being made of state governments for larger and broader old-age pensions. Already the low fertility of urban women has influenced the design of living accommodations. Conversely, it is undoubtedly true that the type of living accommodations designed have also had a pronounced effect on the lowered fertility of urban women. It is difficult to determine which is cause and which is effect. However, it has always been noted that as the population tends to cluster in urban centers the fertility of women decreases.

It should be assumed that it is sound national policy to develop plans for living which will encourage more urban families to have children. Present population trends indicate a slight increase to about 1955, but in the long run we will just about stabilize at somewhere near the present level. Under these circumstances future design and layout should encourage a larger proportion of married women to have children. If this be desirable, then the future development of cities should provide appropriate light, space, air, playgrounds, schooling, and recreational facilities which will encourage that result. Recently, however, these developments have been, for the most part, in the suburban areas of the cities.

There has been much discussion about the desirability of decentralizing industry. Development of war industries has not followed this pattern, but has been expanded and developed for the most part in existing urban areas. In order to amortize the huge investments involved, industrial development is likely to continue in urban areas for some time. It is recognized, however, that further decentralization, if it were feasible, would be entirely desirable. It is probable that the decisions made during the past three years have delayed this development for at least a decade.

Reference has been made to the fact that large metropolitan areas may not be as efficient in many respects for the location of plant facilities as smaller cities, or rural areas. This develops from the fact that it is relatively easy to change from steam to electric power. Decentralization is much more easily achieved today than it was 30 years ago. Proper design can provide for fewer high concentrations of people on small areas of land than has been the pattern of the past. This would seem to be altogether desirable.

During the past half century the advantages of urban life such as telephones, movies, improved transportation and communication facilities have come to the smaller center. General living costs in rural areas are less than for large, concentrated, industrial areas since less overhead and fewer facilities are needed to serve the population. Such a development offers some hope of reducing the costs of government services. Improved transportation and communication facilities make possible the development of fairly satisfactory health, hospital, and sanitary facilities in smaller communities. Death rates among people living in rural areas and in small towns are still less than they are in cities despite the fact that cities have the largest number of doctors and the greatest number of hospitals. This suggests that the tempo of highly-competitive urban life is more destructive of people than the reduced tempo of the smaller community.

In conclusion, the following factors may be expected to influence the probable distribution of population in the future: (1) as mechanical improvements become more widespread in agriculture, the farm population will decline. (2) Further development of the smaller communities now classified as "rural nonfarm" will occur. Present evidence indicates that such communities can be operated and managed less expensively than large cities. (3) The foregoing developments seem to suggest that the present large metropolitan areas are not subject to any great increase during the next few decades. Such expansions as have occurred in metropolitan areas such as Baltimore, Hampton Roads, San Francisco, Cincinnati, and Detroit have been developments beyond the corporate limits of the city, and as improved transportation becomes available after the war we may expect further diffusion of the population of these areas. Last, it would seem possible to influence future population developments by acceptable design, by taking into consideration the objectives we hope to realize as a nation and using them as a basis for our future building plans.

BIBLIOGRAPHY

Bureau of the Census, *"United States Summarys Population, First Series,"* Table 18. (1940 census.) (Bureau of the Census, Department of Commerce, Washington, D. C.)

National Resources Planning Board, *Population Problems.* (Pamphlet, Government Printing Office, Washington, D. C., 1938.)

National Resources Planning Board, *Population Statistics: 3. Urban Data.* (Government Printing Office, Washington, D. C., 1937.)

National Resources Planning Board, *Problems of a Changing Population.* (Government Printing Office, Washington, D. C., 1938. Part III on "Trend in Population Redistribution.")

Thompson, Warren S. *Population Problems.* (McGraw-Hill, N. Y., 1935. Chaps. XVII-XX.)

Wehrwein, George S. "The Rural Urban Fringe," *Economic Geography,* Vol. 18, No. 3. July, 1942. Pp. 217-228.

6 Housing and Community Planning, by Henry S. Churchill, AIA. Planning Consultant, N. Y. State Div. of Housing; Chairman, Committee of City Planning and Zoning, Citizen's Housing Council; Architect with Resettlement Administration in planning one Greenbelt town.

In the past not many architects have concerned themselves with urban problems. And until recent years, and the growth of public housing, little was known to the profession about large-scale developments and their place in the urban pattern. The architect was the designer of the single house on the predetermined lot. Subdivisions were laid out by surveyors. The architect took what he was given, including the idiosyncrasies of his client. "Site planning" was an uncoined term, and the spatial relations of groups of houses, the esthetics of streets seen as something passed through and consisting of ever-changing views, the economics of large-scale enterprise, were all but unknown. The so-

ciological implications were not even comprehended, for those of us who were not lucky enough to work for the rich worked at least for the middle class whose sociological problems are of the bridge table and golf course.

Housing and community planning were not architecture in those days. Not so very many years ago I was a member of a committee to dispose of scholarship funds for what the deed of trust termed "studies of an architectural nature." I suggested some much needed research into some phase of housing, and was promptly told that "Housing isn't architecture."

Well, the concept of what is architecture is changing. Our clients used to be kings and nobles and the Church, and then the wealthy middle class and the State. In the future our client will be the people. I hope one definition of architecture will always be "the art of building beautifully"—but to me it is more exciting to try to build beautifully for all than for the few.

Our present ideas of housing and the community that housing implies derive from the English—from Robert Owens, Ebenezer Howard, and Raymond Unwin. That means that we still all too often think in reformist terms, for these men were in a sense Utopians, turning away from the slums and dirt and congestion, by-products of the industrial revolution, to pastures new outside the city. I do not mean that what they did was not sound or inspiring or that there is a better tradition which our pioneers—Henry Wright, Clarence Stein, Frederick Ackerman, and others—could have followed. I mean that we cannot stop with their concepts, which fell short in economic analysis of the problem as a whole, and which could only use as postulates the conditions of their own time.

As a matter of fact, all the early thinking and analysis was in the direction of the separate community and had nothing to do with what we call urbanism. From the Owens colonies to Radburn the emphasis was on how to plan for the good life away from the city. This emphasis we are still injecting into our thinking about urban problems and it is perhaps hampering us to some extent.

The great contribution of our own pioneers was in the realm of technical analysis. As the nature of finance capital, and the effects of an economy of scarcity became ever more apparent, the relation of space to cost became of paramount importance. It had naturally two aspects: how could costs be lowered, and how little could you give and still have people live in it?

So, for the first time, technical thinking was applied to comparative costs of site work, and utilities, the differentials occasioned by the use of coal or oil, savings due to traffic segregation, economy of the row house, capital costs versus maintenance and operating expenses.

Later, as public housing came into being, the same type of analysis was applied to the dwelling unit itself. All sorts of measuring rods were devised to prove the greater or less efficiency in terms of cost of this or that plan or type of unit. Plans and reports bristled with tables of coefficients and ratios. It was all new, all exciting, and full of discovery, and for the planners most essential as a tool. It achieved a major victory when Andrew J. Thomas finally convinced a great financial institution, the Metropolitan Life Insurance Company, that it could obtain the same revenue and have a far sounder investment if it built its low-rent dwellings in Queens on only 45 percent of the property instead of the legally permissible 70 percent.

This analytic procedure had one fatal defect, however. Like most pseudo-scientific methods that reduce everything to a numerical base, it omitted human values, the incommensurable element. Consequently, when the penny-pinching administrators and cost-account boys got hold of it, the planner with a conscience was squeezed dry. It was very easy to prove by analysis that one plan cost more than another, but very hard indeed to prove to the skeptical that one plan was worth more than another in terms of decent living. The planner's tool to reduce waste became an administrator's bludgeon to reduce standards.

Here I want to digress a moment to talk about standards and the need for them. I have been an architect working on housing projects and a government consultant reviewing other architects' plans. Standards are a protection both for and from the architect.

In the early days of the USHA it was found that the analytic tools I have been talking about gave the review boys an excellent excuse to try to drive space down below the limits of reasonable human use. Minimum standards were needed to prevent them from forcing architects to design projects that would have wasted the taxpayers' money by being impossible to live in. And, at that, they damned near succeeded. On the other hand, it was found that not one architect in fifty had the remotest idea of what economical planning meant, and there just was not time to teach them that 12′x20′ bedrooms, "galleries," and dark kitchens did not make sense in low-rent housing. Specifications were equally absurd—most architects had no conception of comparative costs, either in terms of first cost or of maintenance. Uniform criteria were needed for criticism and review. Standards were imperative.

Their development was interesting and resulted in lots of worthwhile investigation into living habits and management problems. I was fortunate enough to have a great deal to do with setting up standards and also, I am glad to say, later knocking a lot of them down. Standards are only good if they are not allowed to become stale. They should be revised every two years at least, in the light of new knowledge and improving techniques. They should always tend to become less restrictive and more flexible. Standards should provide a measuring rod, based on number, but informed with the habits, needs, and even the desires of the people who live in the projects.

Since the early days of public housing a great deal has been learned about what standards should be. A huge deal more has to be learned. For the never-to-be-forgotten point about standards is that, under our economy, they are absolute. There is no such thing as a minimum standard: it is always also the maximum. Therefore, if we are to build dwellings which, with a rising standard of living, will continue to be sound investments of public money, we must set our sights pretty high. The principal objectives have been fairly set out, I think, in NAHO's *Practical Standards for Modern Housing,* and in the APHA's *Healthful Housing.* But they are objectives, merely, and to translate them into dwellings and communities requires continual check with projects and the people in the projects—tenants, managers, superintendents. More than that, it requires that the data so accumulated be translated into designs by far-seeing and imaginative technicians.

I have talked to hundreds of tenants, particularly on a tour I made last year to report on occupied projects as part of some work I was doing for the FWA, which at that time was doing defense housing. I am fully convinced that Dr. Lynd was right when he said it is the business of the trained technician, whether architect or sociologist, to guide and direct the unexpressed wants and desires of people. The common man —and I use this term in the Wallacian sense, meaning everybody outside of his particular specialty of knowledge—has no idea of the things he could get through the development of other technologies. People are circumscribed absolutely by the limits of their own experience. A person who has never seen an automobile or a washing machine cannot possibly desire one. People who have never known reasonable privacy because they have always lived in over-crowded homes cannot conceive what proper layout of rooms for privacy means in the easing of family tensions and in added comfort. Conversely, of course, those who have always had plenty of room to escape from too much family or too much next-door family find it hard to imagine the tensions and difficulties such conditions create. And so extra room- or soundproofing between apartments becomes something the poor can do without; proper play room for children becomes something the poor have always done without; and a little extra space to move around in, or careful consideration of bed-lights so husband and wife, working different hours, don't disturb each other—oh, the hell with such refinements for the poor!

Yet these and other things of the same sort are important. As architects, it is our business to find out what is important, to read the studies of Elizabeh Coit, of Svend Riemer, of the APHA, to visit and re-visit our own and other projects. After you have seen families with children really living in dwellings with kitchen-dining and with living room-dining, you will never willingly design another one without a large, ample kitchen. And the fact that young, childless couples prefer the dining alcove off the living room will not throw you off the track. It should be noted that, without exception, all families used the kitchen to eat in, and space should be provided for the family and and for guests. Few families had a table in the living room large enough for dining. In homes where there are children the floors are covered with toys and the question of moving them and setting a table in the living room is impossible. Moreover, in bad weather the kitchen is the only place to dry clothes, so it should be ample in size. Similarly, it is quite instructive to watch a mother trying to bathe a small and squirming child in a 4 ft. 6 in. x 6 ft. 6 in. bathroom with clothes dripping from the overhead dryer, no place for a hamper, and no way of turning off the heat in the exposed steam pipe between the toilet and the rimless wash basin.

The same need for direction, for fresh thought, and continued research is apparent in the larger planning problem of the community, or neighborhood, or whatever you care to call it. A community is not just an

aggregation of dwellings plus a few stores, nor is a neighborhood established by physical boundaries. A community is what the name implies, a group of people with a community of interests, whether in work, politics, local pride, religion, or ideals. A neighborhood is that area within which, for whatever reasons, a spirit of neighborliness exists, and in which people do not feel strange. These feelings can be fostered by physical planning, but it alone cannot create them. If we are really going to rehabilitate our cities we must go far deeper than planning for safe side streets and protective greenbelts.

Experience gained on large-scale housing projects shows that the physical environment *plus* good management can make a vital community spirit. That physical environment alone does not do it is evidenced by those projects where, through either management indifference or active opposition, the community feeling is non-existent. Moreover, the economic pattern of low-rent housing is an unnatural one, and gives us no clue to what the physical pattern of a normal community should be.

The large-scale housing project, whether public or private, has so far been planned for a homogeneous income group. It is, therefore, in the nature of a controlled experiment, with a lot of confusing elements excluded. Not the least important of these exclusions is that none of them has been competitive in the open market. All, without exception, have offered dwelling accommodation below the current market. This has made possible a high degree of selectivity in choosing tenants, and has consequently not provided any sort of test of the qualities of the plans. This is unfortunate, for it has given architects—and clients as well—a perhaps false smugness and satisfaction with their enterprise. I am thinking of City and Suburban Homes Company's early projects, and Metropolitan Life's first venture—which, as time went on and standards rose, had ever greater vacancies in spite of sound construction and what was then the last word in sound but economical planning.

But that is away from the point I was trying to make: that the controlled experiment of the housing project, valuable as it is, is not an infallible guide as to how to plan areas which will be on the free market, catering to various income groups, and endeavoring to provide for their needs. Nor is there any kind of assurance that such areas, when planned ever-so-skilfully as economic entities, will develop even the remotest trace of community spirit or neighborly goodwill.

Perhaps it is not necessary that they do. But at the present time nearly all planners are proceeding on the theory that it is necessary. "The city is a cellular organism," is the catch-word. Each neighborhood is a cell and each cell is made up of particles called communities, and they all add up to the organism called the city. If the cells are healthy, the city is healthy; cancer or blight in one cell spreads to all cells. It is an enchanting theory because you cannot prove or disprove it. The only hitch is that no one has yet defined a neighborhood or sought to define the spirit of a community. It is something like the phlogiston theory of combustion. Before it was known that oxygen was what caused combustion phlogiston was whatever it was that went up in flame. We, too, talk glibly about something we know nothing about. Socially, I do that all the time, of course—but as a technician I try to be honest and stay away from phlogiston, interstellar ether, hot air.

We know little or nothing about industrial blight, for example. What are we going to do with the area from Washington Square south to Canal Street? With the Red Hook area of Brooklyn? What about the increasing vacancies of stores and lofts throughout the city? How can we possibly talk about neighborhoods when we haven't begun to think about business and industry which are the sources of our incomes and consequently of our city's wealth?

Another question is: What about home ownership? And I don't mean just whether home ownership is desirable as a social and economic premise in our mobile world. We will have home ownership for a long, long time. The question is, what is the place of home ownership in the large city, and how do we plan for it? All sorts of things enter into this—the economics of site planning, the provision of community facilities, the ways and means of preventing blight. One of the best preventions of blight is strong, large-scale ownership-management, with control of the character of tenants and shops, and funds for maintenance and repair. One of the principal causes of small-home area blight is the lack of repairs and decent maintenance resulting from a few families either being too poor or too shiftless. Neighborhood associations can do a great deal, particularly in developments like Sunnyside or Radburn, but I doubt if they would function at all in a rental area where the holdings were from small landlords with no interest in promoting such associations, and unable to give tenants any kind of *quid pro quo*. Everybody hates a landlord unless he puts up the appearance, at least, of doing something for his tenants.

Neither we, the architects, nor the sociologists know what a neighborhood is or should be, and yet we are talking about urban redevelopment in terms of neighborhoods. Maybe those are the only terms we can talk in, but also maybe the whole approach should be re-examined. Perhaps we should start with the industrial illness of our city, as Herbert Swan suggests, or with the unfitness of our city as a place for child-rearing, or even with what is now the patent absurdity of our rapid transit system. Or all of those and others combined. Questions of land use, assemblage, and tenure are contributory. The biological analogy of the happy little cell is just too simple, and its many fallacies will lead us astray if we follow it too far.

Nor can we depend on the panaceas being offered us by those planners whose realism lies wholly in the realm of economics, with their slogan of Save the Equity and You Save All. Federal loans cannot do the job unless people can be found to live in the city. The move to rehabilitate New York or any other large city must end in the banks, not begin with them; there must be a reason for rehabilitation other than a financial one, a desire in the breasts of others than only those of "managers of investment capital" as Mr. Schwulst calls his ilk.

Those reasons, that desire, do not exist at present. And that is why I have no faith in the ability of the Urban Redevelopment Act or the Redevelopment Corporations Act, the FHA plan, the Hansen-Greer plan, or others of that sort to effectuate a single job of so-called neighborhood rehabilitation. To me they represent a backward approach, the endeavor to produce for a non-existent market, to create neighborhoods without people.

(I have a footnote here which says: Somebody is going to say, "Look, if you can undersell the market by large-scale production, you'll get the people." True, but if you do that to practically the whole city, where do you get off?)

Decentralization and blight have, it seems to me, rather simple basic causes. People want to move out of congested areas because living conditions are bad in terms of light, air, raising and educating children. Add to this exorbitant rents resulting from speculative land prices and irrational building costs. When outlying land is opened up, with the city itself contributing subsidized transportation, streets, utilities, and schools, people seize the opportunity and move out. As the congestion catches up, they move farther out. Two classes of people are left behind, the very rich who can afford to stay and the very poor who cannot afford to move. And until the blighted areas and slums can be made as worth living in as the outlying areas and the suburbs, and at very nearly the same rentals, nothing, no fancy scheme of cheap Federal money, no banker's tears or realtor's sniffles, can revitalize them. As I see it, we will have to reconstruct the whole pattern of urbanism, starting with the use and tenure of land, and, as the lawyer's say, "including but not limited to," increased employment opportunities, economic security, and a better physical environment.

The latter is our business as architects and planners, working with specialists in the other fields. We cannot do it alone, or without a program. Technically, I feel certain we can solve the problem when we know what the problem is, set up not in terms of separate analyses but as a synthesis. We can lead in helping reach the synthesis.

I have not discussed a lot of particular problems of immediate concern. I find these questions—of densities, site location, plan type, community facilities, management—all intensely interesting but more suited to discussion over the board or with small groups. Their ramifications are endless—for example, there is no arbitrary answer to what is a suitable density of a housing project in New York. A field of reference would have to be established before we could talk about it intelligently. "Suitable" for what? To yield an economic return on a given land price right now? To provide adequate light and air and space? If the latter, how is it going to be financed? Theoretically there is a suitable density for any given set of conditions. And I am not being evasive or Utopian when I say we must define our field of reference—for in any planning we do we must realize that we are in a changing world, and that to plan solely in the field of reference in which we live today is to court disaster tomorrow. How far you can plan for an actual project into the future is going to depend on how far you can persuade your client—whether housing authority, bank, municipality, or private investor—to go along with you. Naturally they will not go very far because they are bound by the limit of our economy. The answer to our cities' ills is not technical but economic, and as an economic system is social; in the last analysis the answer must come from the body social. During this period of transition we can only do our best to improve our techniques and our knowledge.

BIBLIOGRAPHY

Bauer, Catherine, *Modern Housing*. (Houghton-Mifflin Co., New York, 1934.)

British Ministry of Works and Planning. Expert Committee on Compensation and Betterment. (The Uthwatt Report.) Available from British Library of Information, New York City.

(Continued on page 80)

Discussions on Urbanism *(Continued from page 79)*

Cornick, Philip H., *A Study of Premature Subdivisions.* (Institute of Public Administration, Columbia University, New York, 1938.)
Federal Housing Administration, *A Handbook on Urban Redevelopment for Cities in the United States.* (Government Printing Office, Washington, D. C., 1941.)
Ford, James, *Slums and Housing.* (Harvard University Press, Cambridge, Mass., 1936.)
Howard, Sir Ebenezer, *Garden Cities of Tomorrow.* (Sonnenschein, London, 1902.)
National Municipal League, *City Growing Pains.* (New York, 1941.)
National Resources Planning Board, *Our Cities—Their Role in the National Economy,* 1937; *Urban Planning and Land Policies,* 1939. (Government Printing Office, Washington, D. C.)
Royal Institute of British Architects, *Rebuilding Britain.* (London, 1943.)
Urban Land Institute, *Proposals for Downtown Cities*—Studies of Boston, Louisville, Philadelphia, Milwaukee, Detroit. (Washington, D. C., 1942.)
Wright, Henry, *Rehousing Urban America.* (Columbia University Press, New York, 1935.)

Comments:

Q. This has been very disappointing. I think the attitude is extremely "practical." If we are going to count upon economics as if we are a separate group, then certain problems of housing and of cities are never going to be solved. Let's be impractical; let's be idealistic and let's present some reasonable solution.

Mr. Churchill: I don't have an answer because I think there are too many questions which are unanswerable at the moment. We have to make up our minds what is going to happen on the economic side. The Hansen-Greer plan is an attempt to look forward three or four years and set up a basis for action. I don't think it is going to work. We are either going to continue very much in a realm of capitalistic reaction, which is not going to get us far, or else in ten or fifteen years something drastic is going to happen.

Q. You say we can't plan for tomorrow. But the very essence of good building is to plan for a period of amortization which is at least until the day after tomorrow.

Q. From what I have heard, ten million is the number which would have to be put to work after the war in excess of what we have. Housing is obviously one of the best ways to provide labor, and people need houses.

Mr. Churchill: A program is being set up at the present time. The Housing Authority is planning. As far as they are concerned the standards are those of yesterday. They are doing the same kind of interior planning that was done at Queens Village and Red Hook, crowding people on the land. I don't call that a forward-looking program. It will put people to work, it is true. But is there any reason for putting them to work at something that is already obsolete, or won't it be possible for the technicians to work out a plan which might be better? I don't think we can arrive at a plan by which we can have any kind of ideal density because you run up against economics, but that is no reason to go back.

Q. What would you set up? You have a definite opinion about density. If you feel there ought to be less density you must know how much less density. This is the beginning of a plan. The approach and plan are infantile and shared by 95 percent of architects. The most fundamental approach to planning cities is not the location of houses because you don't plan cities for houses, you plan cities for means of livelihood. The first subject would be industrial location. As it happens, we have built a lot of factories. Take Willow Run for example. There we have an enormous plant. After the war we are going to have many transport planes built because it would seem an obvious way of getting around. Willow Run could be the nucleus for a city.

Mr. Churchill: The story of Willow Run runs to the practical, so I won't discuss it. It would have been a nice town and it was only two miles from the factory. But to get back to a previous point. In order to start a postwar plan in New York City you would have to persuade the New York City Housing Authority and others concerned that you are going to reduce the cost of land in relation to the cost of the dwelling units in some way. Until you get that far with them there is not much you can do. I won't expect a postwar planning program to do very much more than be a little better than what the Housing Authority tried to do in the beginning. I would be satisfied if we were making some progress in New York City instead of retrogressing. I would like to see New York City come down to a density of not over 40 or 50 families per acre at the most. But that would involve all kinds of things. We can't expect that. All we can do is to work towards that type of solution and, in the meantime, try to see whether we can improve our actual technology and knowledge of what people want, and can live in, to the point where we don't make some of the damn fool mistakes made in the past.

Q. You told us some of the problems we have to face and are not facing. You said you didn't think certain laws are going to bring about the solution, but that doesn't mean you think we ought to discard them or not try to work out legislation because we are trained as architects to be analytical. None of the laws is going to bring about urban redevelopment or do anything in itself. But isn't there any other machinery that can be used? The passing of a law is a little tool, and we have to use every tool we can. I was glad you said we cannot set down numerical standards.

Mr. Churchill: I agree with you. I don't think many of those laws will work, and they are something a great many planners are putting their faith in. Some of us are spending too much of our time worrying about these collateral things. A good many of us are forgetting how to plan and be architects. That may become a real danger, and that is why I hope we can gradually become more cooperative.

Q. Isn't that a contradiction?

Mr. Holden: I think it is. I don't like to study mortgage laws, but when a fellow tells me I can't do something because of the laws I have to go into his field to see if he is telling the truth or not.

Q. We are talking about cities and people, why people like to live in cities even at a great sacrifice of those things we are talking about—of light, air, and space. Urbanism is, after all, the idea that mankind is an animal who likes to be in bunches. If we accept that, then the problem of housing is not seen merely as a problem of density or single density for al kinds of people. There should be a study made of varying kinds of groups.

Mr. Churchill: In the course of time that may evolve. I would like to come back to the point of urban redevelopment. Housing does not consist of public housing projects, and we do not know what to do with urban redevelopment of non-housing projects. If we say that tomorrow we will do a housing project that will cover half of the city, and if all the technicians, sociologists, and others got together, they could turn out something that wouldn't be too bad for the next 30 years. But how are we going to provide for competitive markets so as to have a designed urban pattern in a congested city. I don't think the problem is insolvable in a small town where controls can be set up and handled in the course of the next ten years. I think our legal interpretations are tending more and more to that, but I am talking about New York City problems. If there were an urban redevelopment project set up tomorrow that would cover half the city, I don't think that problem could be solved.

Q. The one basic thing we are ignoring is the fact that we are discussing housing in the city and forgetting the large metropolis which dictates what can be done otherwise. The question of industry here presents two problems. We get a plot, our clients wish a certain type of building, and we are tied down to that. We have to give the public some idea as to how things can be handled. We are helpless unless there is some broader understanding. The public hasn't any idea of what we can do. There have to be broader concepts of what the city it to be.

Mr. Churchill: That is right. What are we going to do about it? How are we going to get the story over to the public? It certainly is a problem and one that I hope we will discuss at the end of all of our sessions. There is a selling job to be done. You cannot sell anything until you have something to sell.

Q. There is one important thing we have to do and that is to find out how we are going to support this community, for definitely the trends in New York City are adverse to our supporting the community. We might later discuss the relation of industry to our community and see just exactly what is happening.

Mr. Churchill: I know what you are talking about. A part of the answer to that may be to suppose New York does fall off in population. It may give us the kind of city we want.

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One of the most exquisite late Gothic facades in the world distinguished the Church of St. Vulfran. This lovely structure, which dominated old Abbeville, France, was destroyed by bombs and fire in 1940. The superbly picturesque Place de l'Amiral-Courbert, beloved by artists for generations, was also viciously shattered by the invading Germans. The fourth in the new Eldorado-Chamberlain series brought to you by Pencil Sales Dept. 167-J5, JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

TECHNIQUE USED

To keep the church slightly in the background, HB and F Eldorado pencils were used. The foreground buildings were then drawn with 2B and 3B degrees. Black accents in these buildings were put in with a 4B and the tones were washed in with a flat 2H wedge. Rough French sketching paper was used.

TYPHONITE ELDORADO

Competitions

Fenestra Competition

Two thousand dollars in cash prizes was awarded recently for the best designs for postwar windows for hospital buildings and for small houses in a competition sponsored by Detroit Steel Products Co., manufacturers in peacetime of Fenestra steel windows and other building products. Winners in the small house window competition are: First prize, $500—Frank F. Polito and Evald A. Young, Oscoda, Mich.; Second prize, $300—T. Y. Hewlett, Toledo, Ohio; Mentions, $50 each—Karl Kamrath, Houston, Tex.; Royal Barry Wills, Boston, Mass.; Robert Arthur Jones, St. Simons Island, Ga.; Walter John Shelly, Jr., Lawrence, Kans.

Winners in the hospital window competition: First prize, $500—Percy Cashmore, White Plains, N. Y.; Second prize, $300—William G. Moeckel, Wilmington, Del.; Mentions, $50 each—A. Ralph Curry, Kansas City, Mo.; G. Edwin Shofner, Memphis, Tenn.; Lee Charles Mielke, Chicago; Wendell Clough, Perrysburg, Ohio.

Judges in the competition were Edward G. Conrad, Cleveland; Robert B. Frantz, Frantz & Spence, Saginaw, Mich.; Branson V. Gamber, Derrick & Gamber, Detroit; John N. Richards, Mills, Rhines, Bellman & Nordhoff, Toledo; Amedeo Leone, Smith, Hinchman & Grylls, Detroit, chairman; Alfred Shaw, Shaw, Naess & Murphy, Chicago, and R. W. Weed, Detroit Steel Products Co. C. William Palmer, president of the Michigan Society of Architects, served as professional adviser.

Practically all the prizewinning designs depart widely from the various Fenestra prewar window designs chiefly, perhaps, because the competition program carried the suggestion that the competitors use originality and imagination. Although a number of designs showed merit, in the opinion of the judges, none of them is regarded by the company as sufficiently improved over the present Fenestra line to warrant their adoption for manufacture.

Jury Report

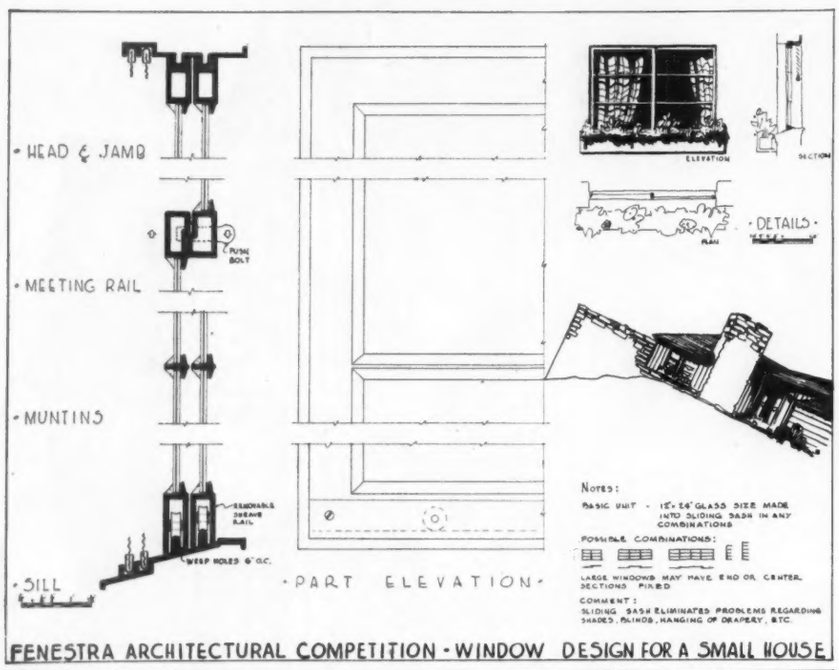
"In the number of drawings submitted for the postwar basic window unit, the jury was confronted with many variants of schemes from the well-known conventional types to some which baffled the jury in the use of far-reaching ideas. One contestant, describing his suggestion for the window opening, said: 'Electric operation of gear box would be a simple matter, thereby controlling any window or series of windows by remote control from any given point of the house. It could be hooked up with electric Time-O-Stat control of furnace, automatically closing windows at a set time when furnace begins to operate—this would be a boon to any person on cold winter mornings.' All this and more in the postwar $5,000 house to come. It is an exciting future!

"The materials suggested varied from plywood, bonderized steel, aluminum, stainless steel to plastics, with the hope that the material the competitor contemplated using would be available in greater quantities after the war, and, with improved production methods by the manufacturers, the cost would be so reduced as to make it available in the low-price field.

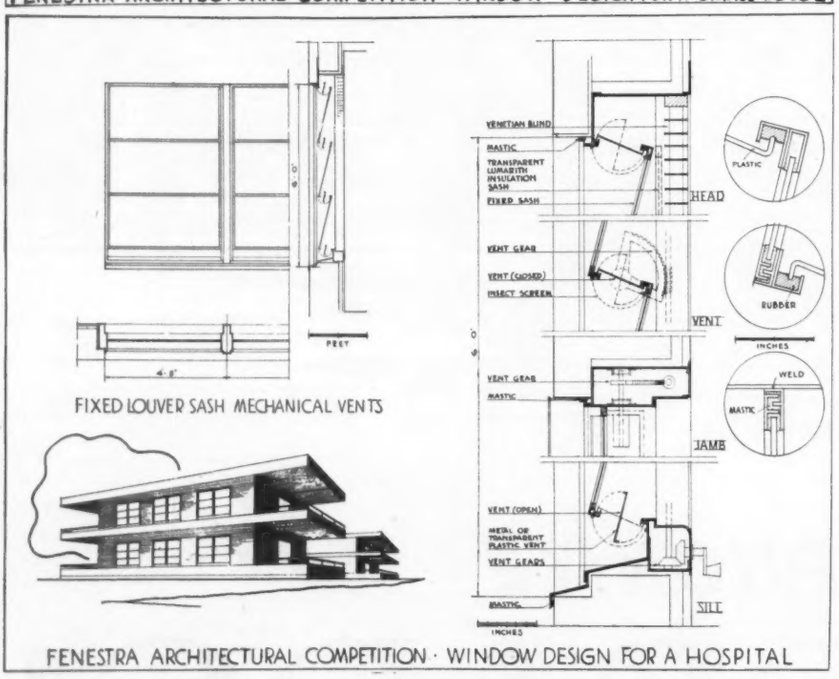
"Many schemes were submitted requiring pockets in the walls for the sash to slide into either horizonally or vertically. These were eliminated by the jury as being impractical and beyond the economic phase of the house in question. Quite a few entries showed large fixed lights of glass extending to about a foot above the floor, with louvers below for ventilation. Here, in general, again it was felt that these were not types, but rather special conditions applicable to certain rooms.

"In the desire for the use of large areas of glass, the cleaning problem of the outside of the windows was not considered. In most cases the suggested house applications of the window were of the one-

(Continued on page 85)



FENESTRA ARCHITECTURAL COMPETITION · WINDOW DESIGN FOR A SMALL HOUSE



FENESTRA ARCHITECTURAL COMPETITION · WINDOW DESIGN FOR A HOSPITAL

At right: first prize winners in the Fenestra competition for postwar windows for hospital buildings and small houses. Top, small house window unit designed by Frank F. Polito and Evald A. Young; below, hospital window unit designed by Percy Cashmore.

(Continued from page 82)

story type, yet the jury felt that in a basic window unit design the two-story house would have to be considered, and with it its window cleaning problem.

"The same fault was found in the hospital window. In this type, it was allowed that in a large building installation the cleaning of the windows might be accomplished from an outside scaffold.

"In general, the hospital entries were disappointing to the jury. While the schemes were well presented, there was very little ingenuity shown by the competitors."

In commenting on the individual entries, the jury said, of the house unit prize-winner: "A simple and well-proportioned unit which seems to meet the scale of the small house. Its horizontal dimension makes for easy sliding. Muntins, if desired for architectural effect, might be wider so as to count in the pattern of the window. The unit size is such that it is easily adaptable to a sash without muntins if one so desires. The frame for the sliding screen might be simplified. Weather-stripping should be provided at the meeting rail."

Of the first prize winner in the hospital unit the jury reported: "A design embodying slanting fixed sash with opening vents between the sash operated by a gear. This window makes for distributed ventilation, easily controlled, and with no direct drafts. No provision is made to clean window from the inside. The jury felt that of all those submitted, this seemed to offer possibilities with further study in the ventilating units."

Fireplace Competition

The Majestic Co., Huntington, Ind., manufacturer of fireplace equipment and other building necessities, invites architectural designers, draftsmen, and students to participate in a competition for grille and mantel designs to be used in connection with the firm's Circulator Fireplace. First, second, and third prizes of $150, $100, and $50 War Bonds respectively will be awarded the winning designers. The firm may, at its option, purchase any unpremiated designs for $25 each. The competition will close at noon, July 31.

Professor Wooster Bard Field, A.I.A., of Ohio State University, will serve as professional adviser. The judges are Wilfred A. Paine, A.I.A., Columbus, Ohio; Herman J. Albrecht, A.I.A., Massillon, Ohio; George Hermann, A.I.A., Dayton, Ohio. Through a ruling of the A.I.A. Competitions Committee, Institute members are authorized to enter the competition.

A complete program and further details may be had from Wheeler, Kight & Gainey, Inc., 74 E. Long St., Columbus, Ohio, advertising agency for the firm.

House Competition

With the cooperation of 22 companies, *California Arts and Architecture* magazine is sponsoring a competition, "Designs for Postwar Living," open to archi-

(Continued on page 86)

Here's a **TEMLOK IDEA** *for wartime remodeling*

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(Continued from page 85)

tects, designers, engineers, technicians, and students. First, second, and third prizes of $1,000, $500, and $250 respectively will be awarded, in addition to five honorable mention awards of $100 each. The competition will close on June 14. Under a ruling by the A.I.A. Committee on Competitions, Institute members are authorized to enter this competition.

Professional adviser of the competition is Palmer Sabin, A.I.A. The judges will be Richard J. Neutra, A.I.A., Sumner Spaulding, F.A.I.A., Gregory Ain, Charles Eames, and John Rex.

Further details may be had from the magazine at 3305 Wilshire Blvd., Los Angeles, Calif.

Kawneer Competition

The Kawneer Co., Niles, Mich., sponsors of the "Store Fronts of Tomorrow" competition, the results of which were published in the February issue, have purchased twelve non-premiated drawings in addition to those receiving the original awards. Authors of the designs selected for purchase are Kindred McLeary, Carnegie Institute of Technology, Pittsburgh, Pa.; Whitney R. Smith, Pasadena, Cal.; Robert A. Bezzo, State College of Washington, Pullman, Wash.; Harvey P. Clarkson, New York; Percy Cashmore, White Plains, N. Y.; Joseph F. Thomas, Knoxville, Tenn.; George N. Pauly, Cranbrook Academy, Bloomfield Hills, Mich.; Donald Barthelme, Houston, Texas; John MacLane Johanson and John C. Harkness, New York; Francis X. Gina and John Matthews Hatton, New York; M. Righton Swicegood, New York; Morris Lapidus, Brooklyn, N. Y.

An Invitation

TO ARCHITECTURAL DESIGNERS DRAFTSMEN and STUDENTS

Fireplace Design Competition

The Majestic Company of Huntington, Indiana, manufacturers of fireplace equipment, and other building necessities, invites architectural designers, draftsmen and students to participate in a competition for grille and mantel designs to be used in connection with the Majestic Circulator Fireplace.

Winners will be awarded Victory Bonds as follows:

***First* prize a $150.00 bond (for grille and mantel)**
***Second* prize a $100.00 bond (for grille and mantel)**
***Third* prize a $50.00 bond (for grille and mantel)**

PROFESSIONAL ADVISER

Professor Wooster Bard Field, A.I.A., of Ohio State University.

THE JUDGES

The judges are experienced practicing architects and members of the American Institute of Architects. Wartime travel conditions have prevented a selection of judges from more widely separated points which the sponsors would have preferred. The judges are as follows:—

Wilfred A. Paine, A.I.A.
Paine and Crumley, Architects, Columbus, Ohio

Herman J. Albrecht, A.I.A.
Albrecht and Wilhelm, Architects, Massillon, Ohio

George Hermann, A.I.A.
Hermann and Brown, Architects, Dayton, Ohio

A.I.A. SANCTION

The Committee on Competitions of the American Institute of Architects has examined this program and approved the competition for participation by its members.

COMPETITION DATES

The competition opens June 1, 1943 and closes at noon July 31, 1943.

Write Today for Complete Program & Details

The MAJESTIC Company

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AISC Competition

Owing to conditions brought about by the war, the American Institute of Steel Construction has decided that, until the war has ended, no awards will be made in its annual bridge competition. This competition has been held annually since 1928, and awards have been made to the most beautiful large, medium-sized, small, and movable bridges constructed during the previous year.

As some bridges have been and will be built since 1941, the period covered by the last competition held, and the end of the war, it is the intention of the Institute to reinstate these awards, and the structures then eligible to compete will include all those steel bridges constructed since the beginning of 1942 and the time of reinstatement of the competition.

Pencil Points Prize

J. B. Francis, of the University of Pennsylvania, was awarded a mention and the NEW PENCIL POINTS Prize of $50 for his design of An Evacuation Camp called for in the recently-concluded Class A Sketch II problem of the Beaux-Arts Institute of Design.

A mention and the NEW PENCIL POINTS prize of $25 went to G. W. Gunn, Jr., University of Illinois.

A mention was awarded to W. A. Fincke, Oklahoma A. & M. College. Other awards: half mention—T. Bear, J. S. Baker, D. E. Barnett, E. T. Gerding, D. Kaplan, E. E. Lohr, H. L. White, all from the University of Illinois; L. J. Warner, University of Pennsylvania; E. R. Gilbert, unaffiliated.

The Jury of Award included A. F. Brinckerhoff, James Gambara, Robert S. Hutchins, Bernard Rudofsky, Lucian E. Smith, and Oscar G. Stonorov, who was also the author of the sketch problem.

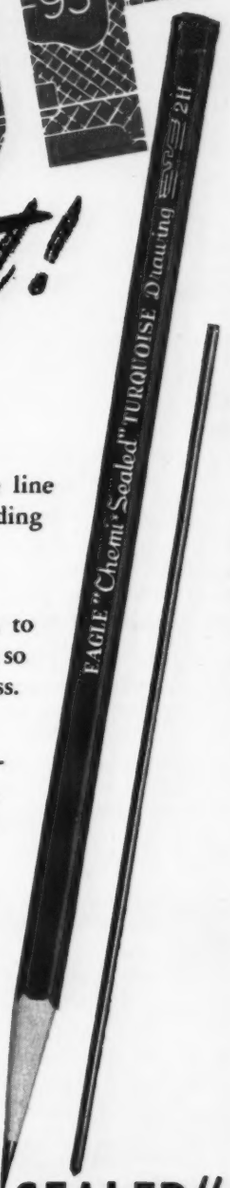
Lord & Taylor Award

William Francis Gibbs, noted naval architect and the designer of the Liberty ships, was one of the recipients of the four $1,000 awards given this year by Lord & Taylor, New York department store, for outstanding achievement in industrial design. Mr. Gibbs is vice-president of the firm of Gibbs & Cox, naval architects.

Other designers and inventors who were honored for their contributions to the war effort were Igor I. Sikorsky, for his helicopter; Edwin R. Goldfield, president of the Picker X-Ray Corp., for his mobile X-ray unit; Frank C. Speke and Clarence Reynolds, shop foremen at Willys-Overland Co., for their shell gauge design.

Some of the members of the jury were John W. Root, architect; Raymond Loewy, industrial designer; Dorothy Wright Liebes, textile designer; Lawrence Ottinger, president, United States Plywood Corp.

The PROOF is in the print!



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Books and Periodicals

Rebuilding Britain

Published for the Royal Institute of British Architects by Percy Lund, Humphries & Co. Ltd., 12 Bedford Square, London, W.C. 1. (80 pages, illustrated, 7½"x9¾". Price 3/6. Published February 1943 on the occasion of the exhibition, Rebuilding Britain, at the National Gallery, London, organized by the R.I.B.A. and sponsored by the building industry.)

This pamphlet is excellent. It is clear, succinct, and non-technical. It explains what the public, through its servants in government, should look forward to and demand. It is not obfuscated and befuddled with amateur economics: it assumes that, in postwar Britain, what the public reasonably wants it will get. This booklet shows some of the things that might be wanted if enough of the public knew about them, and realized how easy it might be to get them, now that Britain must be rebuilt. Obviously, the thing was written by young men with noses clear of the trough, eyes on the level horizon, and ears well above the ground. Our own Institute has yet to produce such a document.

The problems of Britain are not the same as our problems, either in scope or tradition. But planning, and the objectives of planning, should be the same—the ordering of purpose, and purposeful order. The lesson *Rebuilding Britain* brings to American architects is that their part in a postwar world must be also part of a plan, in which they work at a level dictated by their training and technic. Sociology, economics, government are also planning levels, but the architect who tries to work on all of them ceases to be an architect.

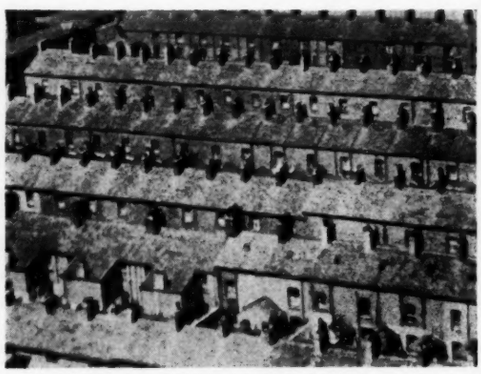
The second part of *Rebuilding Britain*, "Some Account of the Work of the Reconstruction Committee of the R.I.B.A.", makes the distinctions handily. It is aware of the impinging problems of other levels, states them for the benefit of the experts in those matters, and leaves them to be solved by those experts. This is becoming modesty. Also, it leaves the architect free to concentrate on the really terrific problems of his own art (the British still think of it as an art, funny old-fashioned duffers!) and on problems brought to them by sociologists, economists, and civil servants as a result of the impingement of physical planning onto those levels.

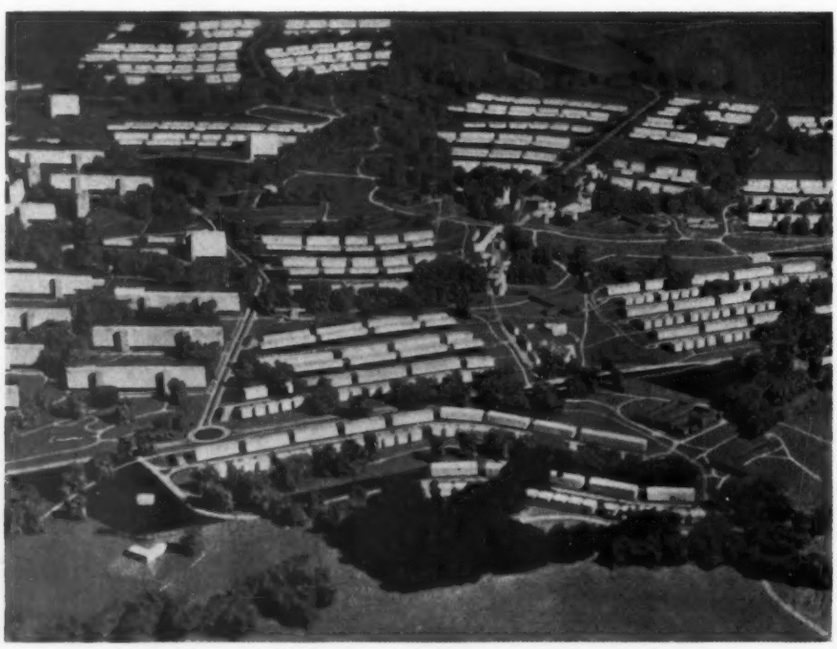
The tenor and purpose of the book for the layman is best told by quoting: "If we are going to be determined about getting something genuinely better than we have had before, we need to be clear in our minds about what sort of things are important. We don't need to be able to suggest plans in detail at this stage; but we do need to know something about the extent of the problem and what standards the plans should satisfy when they are eventually worked out. We do need to know what sort of possibilities there are, and to realize what advantages those possibilities could give us in the way of pleasanter and healthier lives. . . . The answer to these questions is not to be found in our own hearts, for factors are involved which are more fundamental than our personal aspirations and preferences, and which are embedded deep in the economic life of the whole island. We can answer these questions only by looking at the pattern of Britain as it is today, understanding the reasons why that pattern is there, and whether, in general, it is appropriate, and whether the conditions that produced it are likely to continue.

These questions are put in simple terms, with simple answers related to people's needs and desires, and the only startling thing is the complete assumption that National Planning is a fact and that this is a discussion of what can and should be done within the frame of National Planning. If not the Uthwatt recommendations, then others of equal import; if not the Beveridge Plan, then some other: but clearly, no more *laissez-faire*. There is no rigidity of plan implied; as architects used to dealing in alternatives, many ways and schemes for rebuilding Britain are suggested. But these are alternatives, not compromises. They are various roads to one objective.

No doubt there is a dissenting group among the British architects to whom planning is meaningless and who confuse it with regimentation. Apparent clarity and simplicity of purpose are often the result of the elimination of detail by distance. No doubt to an architect in Britain the picture is muddied as it is here. But it is hopeful that this book is brought out under the official aegis of the R.I.B.A., not frowned upon and taken to Task.

Henry G. Churchill





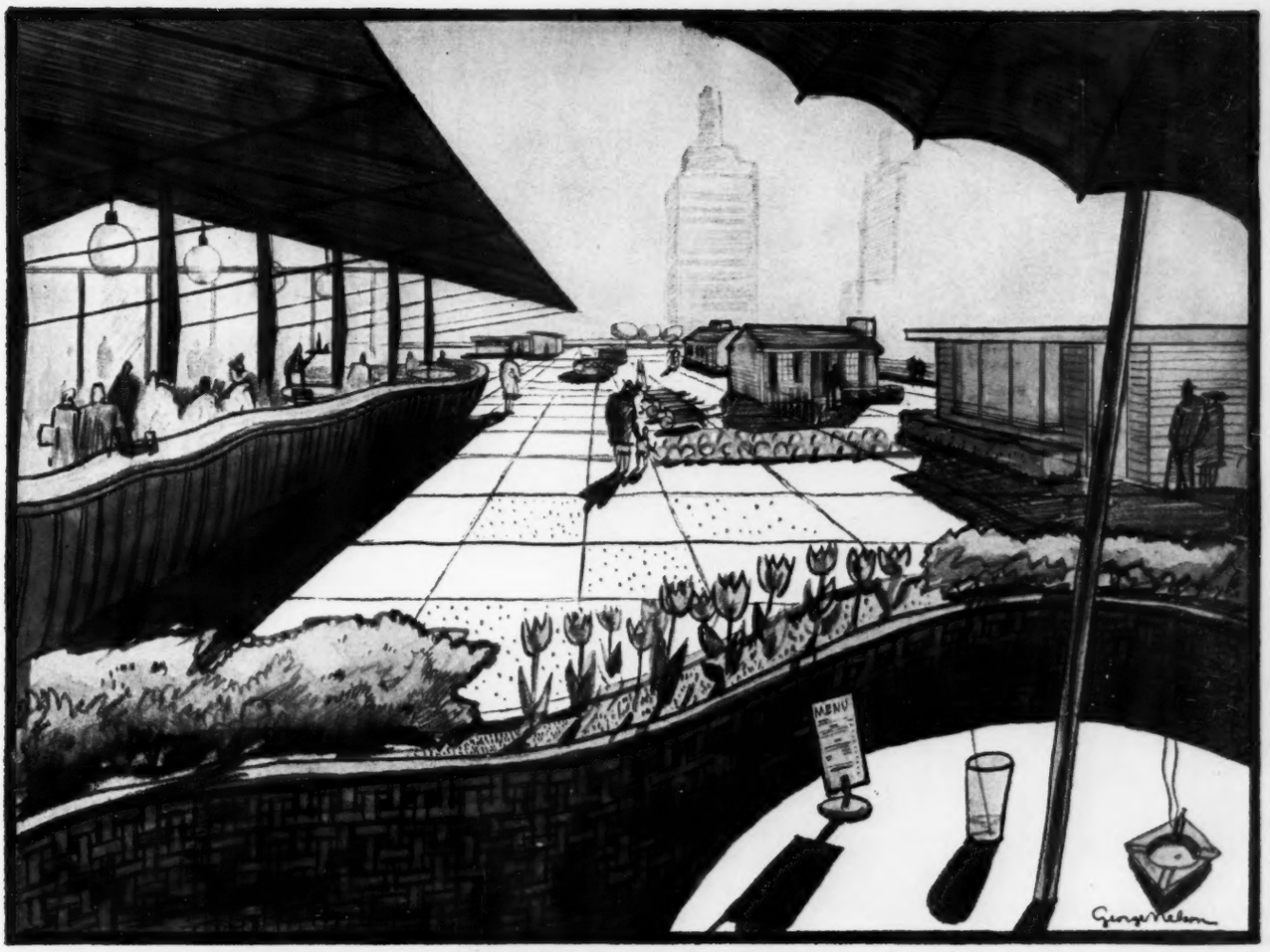
The illustrations on this page, reproduced with permission from the book, "Rebuilding Britain," show, below, part of the model of a project for a new town, with terraces of houses, and some blocks of flats on the left. It shows how town planners try to get open spaces and trees flowing right through the town, and how they plan residential buildings clear of the main traffic roads. Contrast this with the illustration at right above which shows how, in the nineteenth century, mile upon mile of Britain was covered with monotonous and lifeless dwellings.

Christian Symbolism in The Evangelical Churches

By Thomas Albert Stafford, with an introduction by Ernest Fremont Tittle. (176 pages, 6 x 9, illustrated. Abingdon-Cokesbury Press, New York.)

Throughout the centuries, Christian art has created hundreds of distinctive symbols which embody, in visible form, man's conception of the personages, doctrines, and the meanings of Christian religion. The book traces the historical background of the symbols, fully describes them, and expands their spiritual truths.

(Continued on page 94)



DEPARTMENT STORE IN 194X

AN outdoor selling department that is *actually* out of doors . . . prefabricated houses for sale on the roof of a department store . . . This is just one example of the many functional possibilities of roofs in the post-war building era ahead. Designed by architect George Nelson of New York City, this project opens new horizons in department store roof design. Space is provided for assembled prefabricated houses, arrangements of outdoor game equipment, garden furniture and pools, where they may be exhibited in their proper surroundings. Featured also are an attractive soda fountain and restaurant with tables indoors and out. The roof is appropriately finished to protect the waterproofing membrane and utilize important roof areas which are generally neglected.

* * *

This is the first of a series of architectural designs providing greater utilization of roof areas, a development forecast by the Barrett Roofs which support roof-top gardens in Rockefeller Center, New York, and elsewhere.

In post-war buildings, traditional limitations of design will be put to test, and many new practices and techniques will unquestionably be developed. Just as Barrett Specification Roofs proved their adaptability to new architectural forms in the decades since 1854, so too will these famous coal-tar pitch and felt roofs continue to provide the maximum in dependable, long-lasting waterproofing and weather-proofing protection for the buildings of tomorrow.

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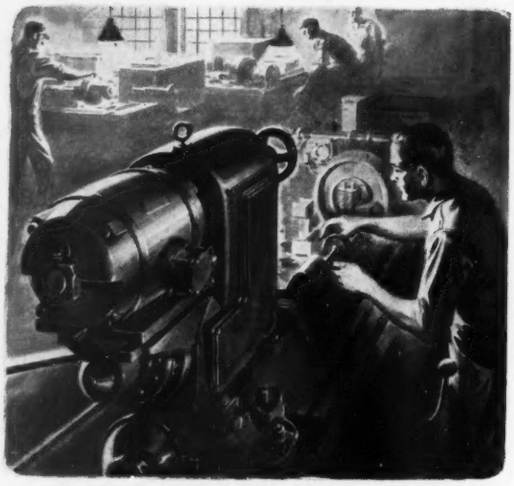
This motor got on the job

A.M. PICK-UP



"Rush new motor Air Express" was the order a supplier received at 9 A.M. Ready for pickup at 10, it was taken to the airport, flown hundreds of miles to destination . . . and installed on a vital war job that same afternoon.

This motor was delayed

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Shipments ready for morning pickup but held for "late afternoon" routine, may be subject to delay. Heavy, peak-hour traffic may keep them grounded until a midnight or early morning plane.

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To move emergency parts and critical material at 3-mile-a-minute speed, Air Express is on the job around the clock—not only on the home front, but working hand in hand with Army and Navy Air Transport services to supply our fighting fronts throughout the world.

You can help us give you the most efficient service in two important ways: SHIP EARLY—as soon as shipment is ready—to assure *fastest* delivery. PACK COMPACTLY—to conserve valuable space. Get our handy "Shipping Estimator" for finding costs and transit time. Write Dept. PR, Railway Express Agency, 230 Park Avenue, New York City.

AIR EXPRESS

AIR EXPRESS

Gets there FIRST

Phone RAILWAY EXPRESS AGENCY, AIR EXPRESS DIVISION

Representing the AIRLINES of the United States

(Continued from page 88)

Plates, diagrams, and pictures all help to locate Christian symbolism in its proper place. The book also outlines practical plans for using symbols as aids to instruction, as enrichment of worship, and as motifs of church architecture.

Church architects will enjoy the informative material contained in the book.

Periodicals

Canada

Journal of the Royal Architectural Institute of Canada. (February and March issues.)

"Reports of the Dominion Bureau of Statistics" are summarized, covering farm and city standards of housing—values of buildings, crowding, rentals, earnings per person, rooms per person, and conveniences. The editors believe that there is no danger of private enterprise being ended by public enterprise, and they so state.

Most valuable is the reprint from Focus (London) of an article by Le Corbusier, "If I Had to Teach You Architecture." This really young critic outlines methods of teaching from which even the most progressive of today's professors can take guidance. He carries the torch for our present trends in architectural design by such comments as, "What is even more ludicrous to see is the fierce opposition of our fathers and grandfathers (magistrates, town councillors, etc.) to any manifestation of the modern spirit. Who are the towns of the future designed for? For those who will soon be dead, with their habits anchored to the pit of their stomach, or for those who are yet unborn? Their defensive attitude is comic."

The March issue is taken over by reports on the thirty-sixth annual meeting of the Royal Architectural Institute of Canada. Of prime interest is an address by Dr. F. Cyril James on rebuilding Canada as well as Britain itself, the former because progress demands—not because of blockbusters. He warns against expecting community planning to be financed by the Government, advice that can equally well apply in our own country. "To advocate complete Government responsibility for community planning, and all other aspects of reconstruction, is simply to suggest that a group of parliamentarians and civil servants is able to spend our money for us better than we know how to spend it ourselves—which is to me an utterly untenable assumption. . . . It denies the value of personal responsibility and individual initiative, just as effectively as the doctrines of National Socialism in Germany have denied it."

England

The Architectural Review. (January, February, and March issues.)

A description of Britain's handling of the problem of supplying bombed-out and recently-married couples with furniture is of interest to us because we need good, inexpensive pieces now and for the post-war period. At the time this article was

(Continued on page 92)

NO CRITICAL METALS IN THIS FLASHING!

Time-tested Johns-Manville Asbestile Flashing gives extra protection at the points where most roof troubles start

HERE IS A FLASHING SYSTEM that permits your clients to make necessary repairs to existing built-up roofs . . . even to apply a complete new roof with flashings . . . without the use of any critical metals.

It's the J-M Asbestile Flashing system . . . proved for years in actual service . . . called by many experienced roofing contractors "the foolproof flashing."

The flashing felts used are basically the same as the asbestos felts used in the well-known Johns-Manville Smooth-Surfaced Asbestos Roofs. They are fireproof and rotproof.

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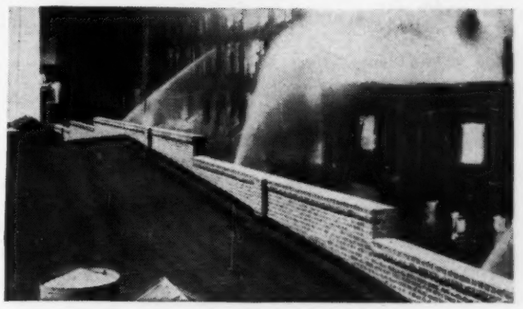
This means maximum assurance against leakage . . . extra protection for the building structure and for the equipment under the roof!

For details on J-M Asbestile Flashing and J-M Asbestos Roofs, write for a copy of the 48-page book, "Things You Should Know About Your Roof." Johns-Manville, 22 East 40th St., New York.



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(Continued from page 90)

written, only one type of furniture, state-controlled, was being manufactured in Britain; designs were extremely limited and construction was scaled to low cost. Although design to date is not excellent, neither is it poor. Future pieces promise advancement.

Excellent photographs are shown of Tsarskoe, now called Pushkina, the Versailles of the Russian Tsars. Charles Cameron went to Russia to add to the palace in the late eighteenth century. His life and Russian work are the subject of an article.

A plea is made for the designing, now, of standardized equipment for postwar housing. Kitchen stoves, sinks, baths, basins, lighting fixtures, etc. should be mass-produced as are Bren Guns today.

"Between the eye and the house," by Kenneth Rowntree, is an article on the vision painters of architecture have of everyday objects which they paint, on their power to disassociate objects from their surroundings, on the differences between the painter's and the architectural draftsman's vision of the same material. Implied, at least, is the thought that sometimes the architect may not see the forest for the trees.

A study of Britain's postwar relocation of industry, inter-related with population redistribution, is made by Professor P. Sargant Florence. A special technique of obtaining statistical data for this work has been worked out in the form of eight tables with comments which explain their function and use.

A critical comparison of the works of Sir Edwin Lutyens and of Frank Lloyd Wright is instigated by the recent publication of their biographies. The far span between the British viewpoint and their conception of our viewpoint is once again inadvertently set forth.

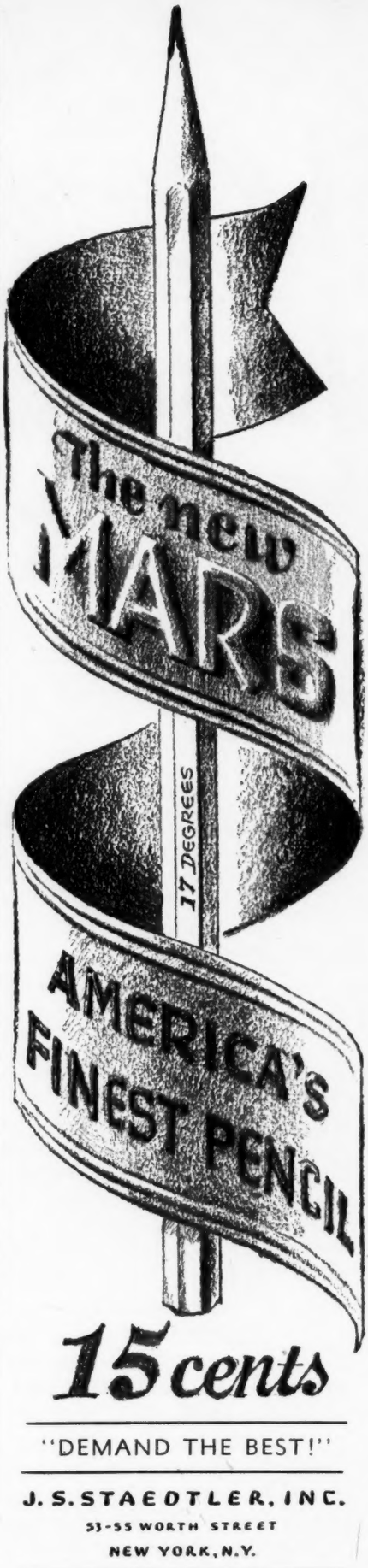
The Architects' Journal. (March 4 and March 18 issues.)

The Rebuilding Britain exhibition at the National Gallery, opened by Sir William Beveridge, sponsored by the whole building industry, and designed by R.I.B.A., had as its aim the showing of the general principles of reconstruction to the public. Speeches by Sir William Beveridge and by Sir Kenneth Clark, director of the National Gallery, are included. *(See review of* REBUILDING BRITAIN *on page 88.—* Editor.)

A White Paper for Training for the Building Industry has been presented to Parliament. It lays down a government policy which guarantees steady employment for 5,000,000 workers in the building and allied trades for ten to twelve years after the war. It means the most revolutionary changes the industry has ever undergone.

A cablegram from Russia lists both the practical activities in connection with the design of new industrial and living premises and the research work being done on theory and history of architecture. Photographs and descriptions are scheduled for immediate publication covering cathe-

(Continued on page 94)



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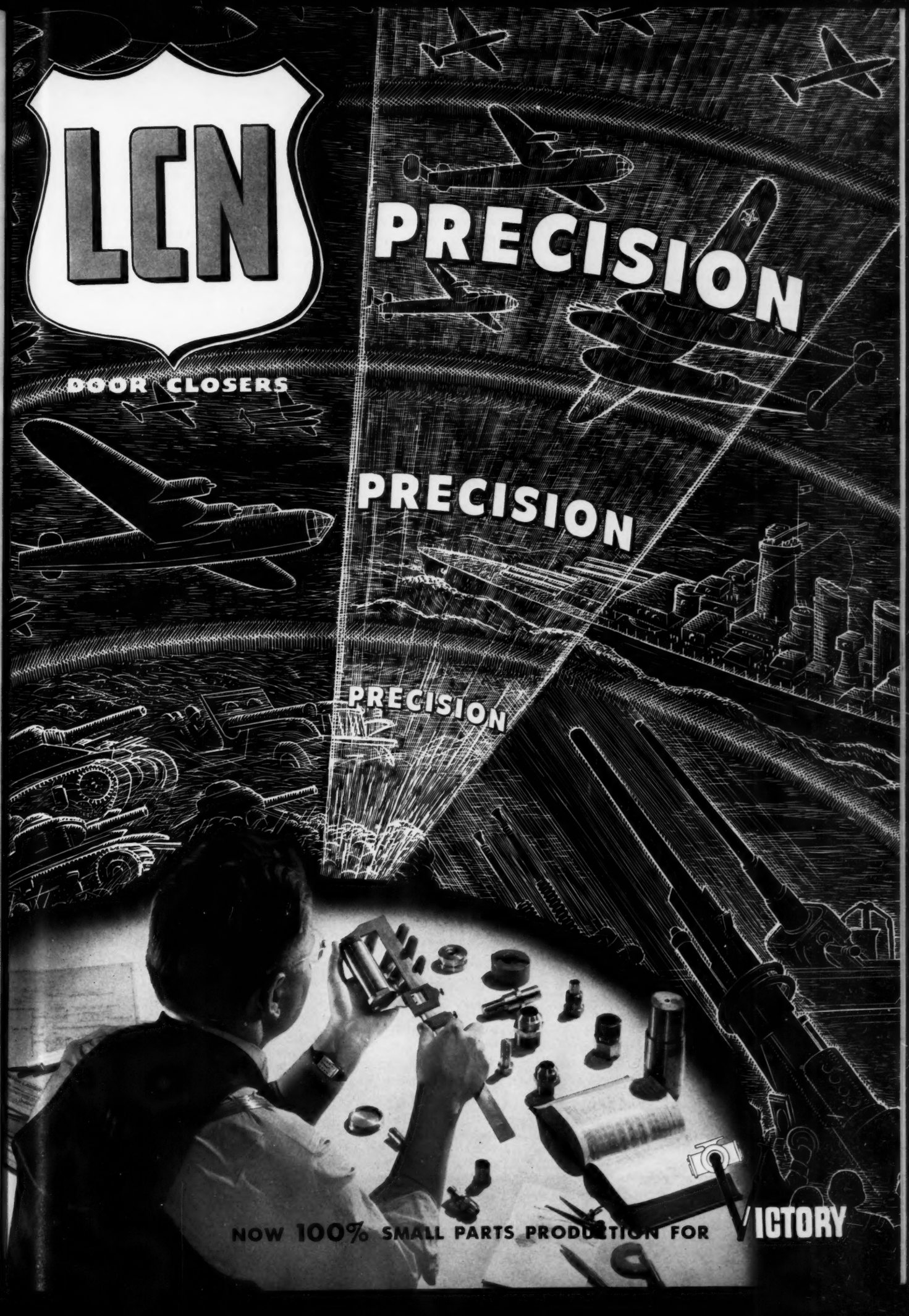
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PRECISION
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NOW 100% SMALL PARTS PRODUCTION FOR VICTORY

(Continued from page 92)

drals, city fortifications, monasteries, dwelling-houses, town planning and construction, and work of present day Soviet builders.

A lengthy report prepared by The Cement and Concrete Association covering the use of concrete in 26 housing schemes is considered of real value to architects and is given a two-column summary.

Journal of The Royal Institute of British Architects. (February issue.)

R.I.B.A. gives its own description of the Rebuilding Britain Exhibition; it serves as a catalogue of the material shown. Photographs are published of exhibits covering proposed city plans, special community needs, industrial plants, transportation, communication, farm needs, recreational facilities, and a plan for London by Howard and Garnier.

A lecture on daylighting of buildings in urban districts, read at R.I.B.A. by William Allen of the Building Research Station, takes up comparative daylight curves and view-of-sky diagrams, depending upon number of stories, distances between buildings, etc.

Architectural Design and Construction. (February and March issues.)

"Cooperative Housing in Sweden" covers history of housing there with special reference to the H.S.B., a financing and building organization. It tells of its methods of handling money and planning matters for the average small house buyer.

The March issue is devoted to rural housing and contains a survey by Edric Neel and Justin Blanco White on planning the rural house—larder, shed, kitchen, porch, wash room, clothes drying cupboard, hot water, and similar details. Other articles cover electricity and gas supply, housing legislation, design standards, cottage flats in Wales, and health centers.

Australia

Building and Engineering. (January and February issues.)

This magazine is the Official Journal of the Master Builders' Federation of Australia and carries out too literally the meaning implied in that title—the furtherance of financial interests in the building trades. It scarcely claims to be a critic or leader in matters architectural. Reporting is done by photographs and some description, of current construction.

United States

Architect and Engineer, San Francisco. (February and March issues.)

Dormitories for single working men at Vallejo and at Sausalito, California, are well described and fairly well photographed. Here, for the first time in public housing, the thesis is held that the single worker, as well as the family, should have a home, not merely a substandard place in which to live. The Farm Security Administration built the Vallejo buildings and the Federal Public Housing Authority, in collaboration with Blanchard, Maher & Ward, did the Sausalito group, profiting by the mistakes of the former which were not constructed of sufficiently durable materials. The second group is also constructed for the duration only, in their present condition, but are heavy enough structurally so that they can be made permanent later at little expense.

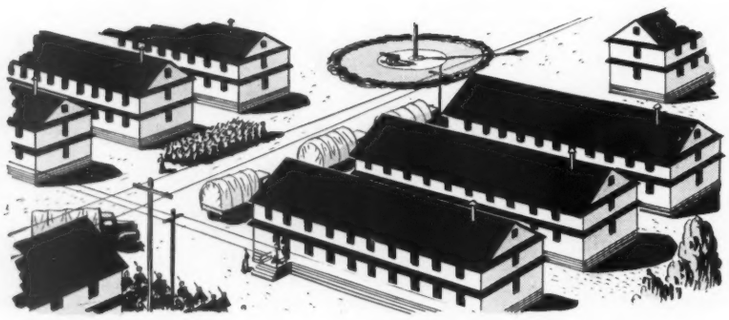
A discussion by James B. Wells, professor of civil engineering, Stanford University, on reinforced concrete structures and their resistance to air attack may be of interest to some architects. He has correlated all the material available to the public at this time.

"Wings Over Architecture," by H. G. Maas, shows the impact of aviation on architecture, or, rather, as many conclusions as can be drawn of its impact from the information that trickles through war censorship.

Valencia Gardens, latest war housing project completed in San Francisco, called a "prelude to mass housing," serves 246 families. As evaluated by the author, Sally Carrighar, it does not rate as an example to be studied seriously by housing architects.

(Continued on page 96)

Tile-Tex is widely used in Military Construction



Tramp—tramp—tramp—go thousands of feet over Tile-Tex floors installed in military establishments. Only a super-rugged, tough, durable flooring can take the punishment of army and navy traffic in barracks, storerooms, laboratories, dining halls, kitchens, offices, and other areas in training centers.

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*Current and Contemplated

Better roofs may be born in an igloo

Current

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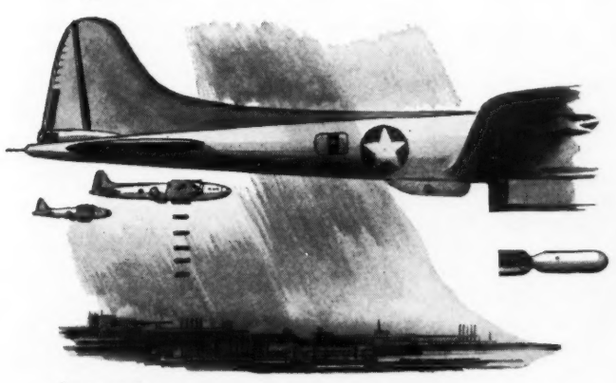
Contemplated

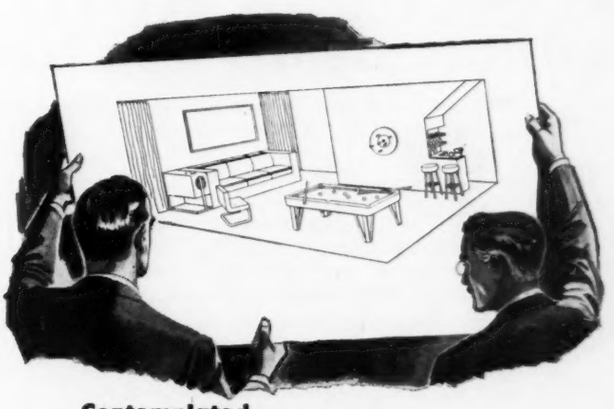
More roofing products may soon be available for non-war use— Many of the biggest wartime building projects are well along toward completion. More coal tar pitch roofing may soon be available. This will be good news for anyone who has roofing work to be done, because coal tar pitch and tar-saturated felt are such long-lasting materials.

Better heat may be born on a drawing board



Current

The Flying Fortresses that rain death on the Axis could not be produced so fast nor so well without America's rich reserves of bituminous coal. Millions of tons are delivered to the war industries, yet ample coal has been supplied for residential heating, and to the coke plants.



Contemplated

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KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

(Continued from page 94)

Interiors, New York. (February and March isues.)

This magazine has shown a steady improvement since its beginning but still has too wide a range of quality, going from the rather indiscriminately chosen photographs of ten entrance halls in the February issue to the excellent choice of material published in March. The latter includes interior and furniture designs by Richard J. Neutra for Channel Heights, a garden community on a mountainside.

Arts & Architecture, Los Angeles. (January, February, and March issues.)

A cave house puts forth the idea of "digging" into the earth for a home. Most of the walls are chemically treated rammed earth, providing sound-, weather-, fire-, water-proof, heat-insulated, and bug-repellent walls. Any variety of dirt is considered for use, with the percentage of bituminous asphalt emulsion being varied according to the properties of the earth. This construction is economical and durable and very little heat is necessary. A hill site is required to use this construction practically.

Both January and February issues contain fine groups of photographs of recently-built California houses, interiors and exteriors, including a very interesting house by Richard J. Neutra.

There is a history of housing in the United States and a valuation of movements and agencies in housing at present, written by Catherine Bauer.

South America and Mexico

Revista de Arquitectura, Buenos Aires. (October through January.)

These issues carry little material of interest although there is much fine work available for publication in the districts this magazine serves.

Arquitectura, Mexico. (July, 1942.)

The material in this magazine rates about the same as does that contained in the *Revista de Arquitectura;* both are in need of possible improvement.

* * *

Planning Bibliography

Third in the series of annotated bibliographies of planning literature, by Margaret Greenough King.

Urban Redevelopment and Housing

National Planning Association, Pamphlet No. 10, December 1941. Believing that by federal or state aid and land ownership the planning program can be developed, this pamphlet outlines the gradual development of the community and how it is finally to reach the hands of private enterprise.

Urban Redevelopment Corporations

Arthur C. Holden. Reprinted from the *Journal of Land and Public Utility Economics,* Vol. XVIII, No. 4, Nov. 1942. Warning against a large federal subsidy in urban planning projects, Mr. Holden criticizes the Greer-Hanson plan and advises a pooling of land in blighted areas to avoid a federal mortgage which would remain unpaid.

Urban Redevelopment Laws Leave Slum Problem Unsolved

By Charles Abrams. Article in leaflet published by Citizens' Housing Council of New York, March 1943. Realizing the swelling surpluses of the insurance companies, Mr. Abrams seeks to find a satisfactory way to use these funds to obviate federal support of urban redevelopment. He feels the redevelopment laws are not clearly enough defined and that the cardinal necessity of providing housing while the slum is being cleared is often forgotten.

St. Mark's Neighborhood

Community Service Society of New York, Committee on Housing, 1941. The need for neighborhood improvement instead of improvement of single buildings is held most important in this booklet and so follows a model survey of housing and property conditions in a typical congested area.

(Continued on page 99)

AND OF COURSE

IT'S **MEDUSA WHITE** FOR LIGHT REFLECTING, SANITARY WHITE CEMENT FLOORS

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(*Continued from page 96*)

To Stop Urban Blight

Arthur W. Binns. From the *Technology Review*, Cambridge, Mass., January 1942. Realizing the centralization of money in institutions and the need for an outlet for this money in spite of its inability to become "risk money", Mr. Binns suggests three principal methods of organization to utilize this latent power: develop a method of land assembly, find a way safely to use institutional funds for rehabilitation, and develop a forward-looking city master plan.

Housing

First Texas conference on the problems of human habitation, held at the University of Texas, Austin, April 1940. A pamphlet including two of the papers delivered by Mr. Hugo Leipziger — "The Practical Problems of Housing" and "Examples of Housing, Today and Yesterday." Most important in these papers is the interest in the reciprocal, psychological effect of man's adventures into the mystical, spiritual world on his architecture. Mr. Leipziger discusses cultural, biological, and religious influences on the growth of a people's architecture.

Future of Transportation

Subtitle, *Building America*. National Resources Planning Board, Washington, D. C., September, 1942. Opening with a forecast of the future of transportation, this publication stresses the fact that no set rules should now be made; rather, a technique for solving the rapidly and ever-changing problems in this field should be developed. Analysis of the problem and policy statements on modernization, integration, and innovation are immediate necessities. Because this is a national publication, suggestions tend toward national control of facilities instead of private enterprise control, but the problems discussed would be important to either group in solving the varied phases of transportation organization.

Guides for Postwar Planning

National Planning Association, 800-21st St., N. W., Washington, D. C. Planning pamphlet No. 8, November, 1941. Excellent and concise booklet on the economic theory behind the need for city planning written so as to be easily understood. This publication stresses full utilization of the country's productive resources and lays the blame for postwar depressions on unproductive saving by a thrifty country. Instead of this, a national plan of savings, accompanied by a guarantee of security for the economically weak, is recommended. Calling a fully governmental program too cumbersome, the pamphlet recommends at least a national board of coordination of all phases of the program. Transportation as a unifying factor, urban development as an area for governmental participation in investment, the aid which full employment gives the development of strong private enterprise, and many other parts of the program are well laid out here. Recommended reading for any planner.

(*Continued on page 100*)

FACTS . . .

(Plus Some CAUTIONS*)

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RELIGHTING

Under present conditions, plant relighting requires careful study and competent planning. The War Production Board has established a procedure that requires proof of the individual necessity for relighting.

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A new lighting system is indicated by any of these five conditions: (1) Building is obsolete. (2) It is not equipped for 24-hour work. (3) It is inadequately converted for war work. (4) Excessive accidents to men and machines. (5) Present lighting is obviously deteriorated.

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IF the request is for incandescent lighting (fluorescent lighting is severely restricted for many uses).

IF specifications are based on least critical materials.

IF the improved lighting will accomplish these ends: reduce spoilage of essential materials; break bottlenecks; prevent accidents; do a better job with a saving in power and maintenance.

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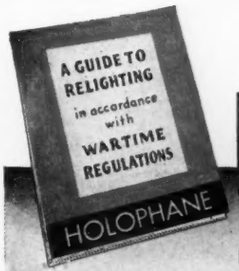
for advice, without obligation, as to your lighting needs and correct methods of procedure. Write for new Holophane Bulletin: "A Guide to Relighting in accordance with Wartime Regulations".



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(Continued from page 99)

Postwar Planning

News Digest of the Citizen's Housing Council, 470 Fourth Ave., New York, March 15, 1943. An excellent issue of the Council's bulletin stressing the immediate importance of urging restoration of the appropriation for the National Resources Planning Board. Specifically, this issue deals with the significance of the Uthwatt Report, the Beveridge Plan, and national, state, and city planning. Most important perhaps is the absence of idealized and impractical plans and the presence of an excellent critical attitude toward approaching the public and government agencies with the problem of planning. An interesting bibliography accompanies the discussions and makes an excellent guide to current publications.

Our Cities

National Resources Committee, Washington, D. C., September, 1937. An earlier pamphlet on the mutual need of aid for municipalities and farm communities on questions of economic and social organization. This publication reviews the basic characteristics of city growth and discusses all phases of preliminary city planning. Really a primer for those interested because of its clear, elementary statements on the subject.

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(The following pamphlets, issued by the Chicago Plan Commission, 20 N. Wacker Drive, Chicago, cover a number of phases in the city planning development on which the commission is currently working. A complete story on postwar Chicago plans was published in the March issue of New Pencil Points.—Editor.)

Airport Program for Chicago and the Region of Chicago

Prepared by a special committee representing the Chicago Association of Commerce, Chicago Plan Commission, Chicago Regional Planning Association, November, 1941. Considering its central location it is little wonder that Chicago looks to an enlarged air program in postwar planning. This pamphlet, well-organized and concise, could form the basis for such a survey of the air facilities and potentialities of any large city and eventually provide for an interlocking program for them. It is accompanied by maps and data on existing conditions and possible developments.

Annual Report—1940

First report of the then newly set-up commission, this pamphlet deals with past work on Chicago communities and traces the development of the Land Use Survey which was inaugurated March, 1938. The object of the survey was the establishment of a basis for rezoning, and laying out scientifically, the city's resources, and to provide the commission with the foundation for an inventory for future reference in determining trends in land use. Survey maps are included and the health and sanitation facilities are reviewed as well as redistribution of police and fire protection, transportation, schools, and business facilities. Seemingly a thorough survey of the city.

Annual Report—1941

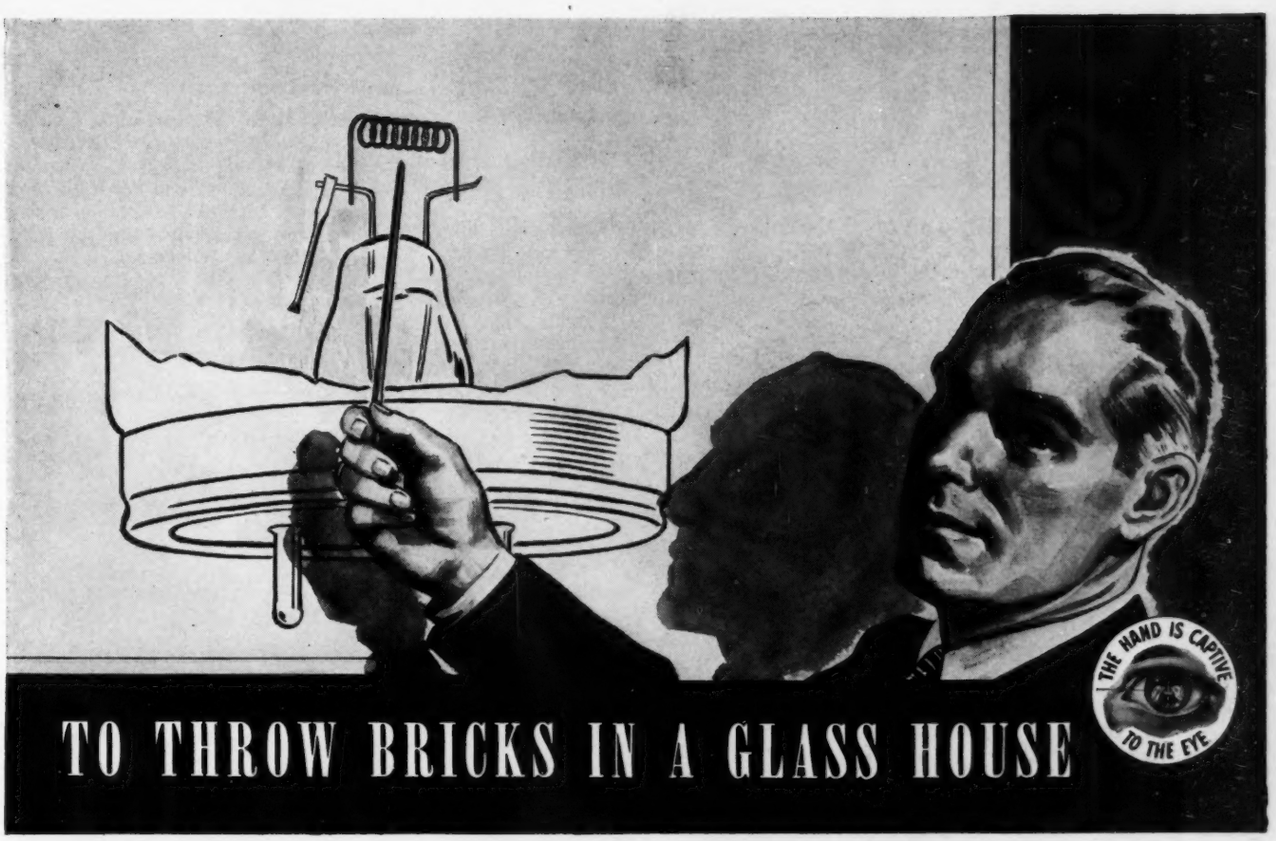
Following the report of 1940, this second annual report covers much of the same ground and outlines work accomplished. It stresses the need for an organized opinion on city planning at the end of the war. Though there seems to be considerable premature blueprinting in progress, the survey has shown the needs of the city and enlisted the interest and support of a group powerful enough to make it a concrete program.

Annual Report of Chicago Medical Center Commission—1942

A commission arising from the survey made by the Chicago Plan Commission which found the need for development of the Medical Center Area. This report seeks a method for elimination of the blighted area around the present center. An early outline of a not yet completely studied program.

Population Facts for Planning Chicago

February, 1942. Because it was an absolute prerequisite to a Master Plan this compilation of facts has been made by the Commission. A factual and graphical survey on a major city, it may serve as a general guide for other such surveys.



TO THROW BRICKS IN A GLASS HOUSE

Hair-fine tungsten, almost invisible to the naked eye until coiled and recoiled, constitutes a cathode. It is coated with a compound which allows it to throw electrons, the bricks of the universe, in the glass house of a fluorescent lamp.

The cathode is a delicate but tough electronic element in the production of fluorescence, which provides the best lighting known for war plants today—and for your home when Victory is won.

At the flick of an electric switch, the cathode throws free electrons—billions of them—into the low-pressure mercury-argon vapor inside the lamp. Free electrons batter mercury atoms, throwing them off balance electrically and into violent motion. In regaining electrical balance, mercury atoms generate ultra-violet rays. This "Black Light" magically makes the "powdered daylight" coating inside the tube fluoresce in a cool, glarefree, shadowless glow more constant than daylight—and just as kind to the human eyes.

During more than ten years of independent research, Sylvania engineers have led in the development of more efficient, more durable cathodes. Electron-emissive material, which is expended in the process of light-making, largely determines lamp life; therefore its chemical formula and application to tungsten are the subject of tireless study.

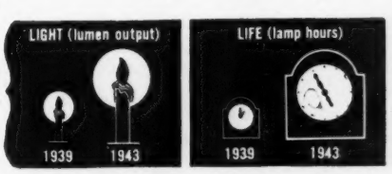
Improvements in material and process specifications are made every week at Sylvania. Many of them, like the "Mercury Bomb" method of precise mercury measurement, conserve strategic materials and labor. But all of them step up fluorescent performance on such counts as lumen output, lamp life, uniform colors, quicker starting—and at progressively lower cost.*

While today's Sylvania Fluorescent Lamps are serving three-shift days in America's war plants, tomorrow's are being made even better. Specify Sylvania replacements for the latest in fluorescent research.

FAR MORE LIGHT AND LIFE FOR YOUR MONEY

*Compared with 1939 a dollar invested today in Sylvania Fluorescent Lamps buys more than four times the lumen output and approximately five times the lamp life.

SYLVANIA FLUORESCENT DOLLAR BUYS:



(Based on decreasing price and increasing efficiency and durability of Sylvania 40-Watt White Fluorescent Lamp)

Even on existing circuits, a change-over to fluorescent—Sylvania Lamps, Fixtures and Accessories—will probably more than double the light you get for the same wattage.

SYLVANIA

ELECTRIC PRODUCTS INC.

formerly Hygrade Sylvania Corporation
Salem, Mass.

Incandescent Lamps, Fluorescent Lamps, Fixtures and Accessories, Radio Tubes, Electronic Devices.

Manufacturers' Literature

Publications mentioned here are all 8½" x 11" unless otherwise specified and will be sent free of charge, upon request. When writing for any of the literature noted here, please mention THE NEW PENCIL POINTS.

Laminated Trusses

New, 28-page booklet, 6"x9", (A.I.A. File No. 19-B-3) from Rilco Laminated Products, Inc., First National Bank Bldg., St. Paul, Minn., shows typical applications of factory-fabricated timber trusses and glued laminated roof trusses, beams, arches, and continuous framing members for use in factories, warehouses, theaters, churches, bowling alleys, etc.

Fences

Data sheet (2 pages, Section III, File 3-D-10) on industrial fences presents information on two standard types, one constructed of random-width Redwood boards, the other of 12" boards with battens and fence cap. For each style, a complete materials list is presented for various heights. California Redwood Association, 405 Montgomery St., San Francisco.

Barcol OVERdoors of various types in hundreds of war production plants are giving long-lived trouble-free service necessary to efficient plant operations. This picture, for instance, shows a Motor-Operated Barcol OVERdoor of the hi-lift weight-counterbalanced type, specially arranged for a railroad track entrance and to clear a travelling overhead crane. For new installations, and to replace existing unsatisfactory doors, specify Barcol OVERdoor.

GET THIS MANUAL
Includes data on the principal features of Barcol OVERdoors, and detailed description of the various types of Electric Operators for Doors and Gates. Write for INDUSTRIAL MANUAL F-1298.

BARCOL

Factory-Trained Sales and Service Representatives in Principal Cities

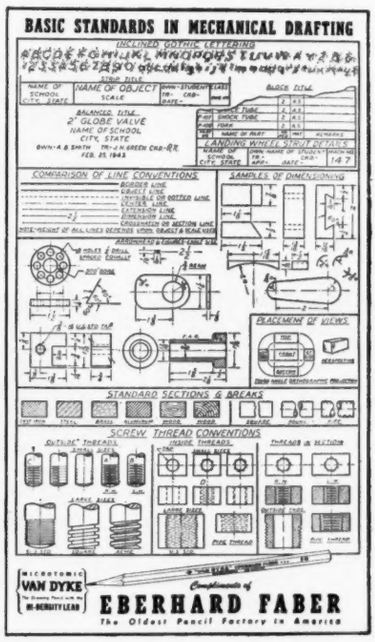
BARBER-COLMAN COMPANY
100 MILL ST. • ROCKFORD, ILL.

Unit Heaters

A description of the Grid cast iron unit heaters, introduced as a substitute for aluminum heating sections to cooperate with the war effort, and especially prepared for the architect, is contained in a catalog sheet now being offered by D. J. Murray Mfg. Co., Wausau, Wisc.

Drafting Chart

Wall chart, 16½"x27½", "Basic Standards in Mechanical Drafting," from Eberhard



Faber Pencil Co., Dept. C, 37 Greenpoint Ave., Brooklyn, N. Y. The chart, shown herewith, will be sent without charge to any instructor or to any school interested in drafting.

Expansion Bolts

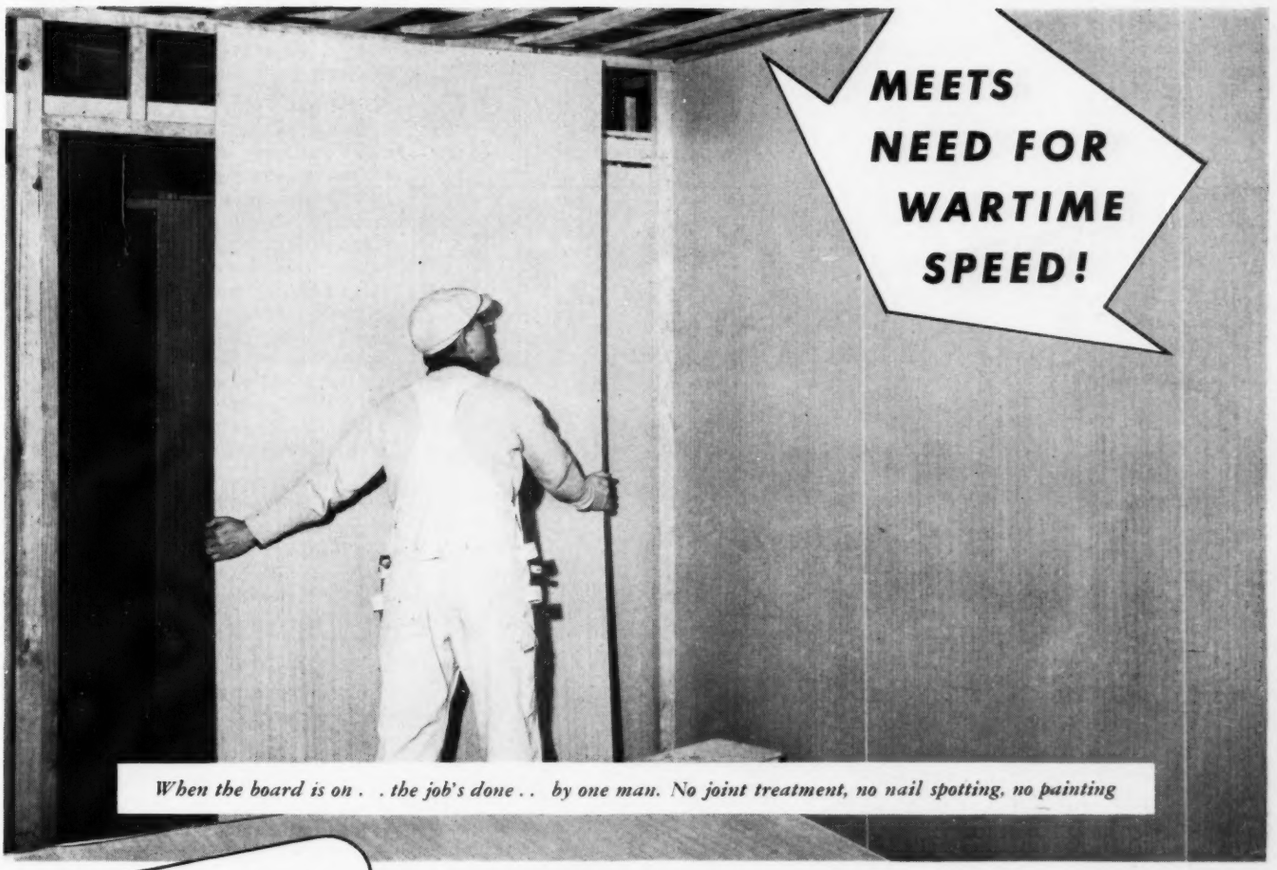
Broadside, with return mailing card, issued by The Rawlplug Co., Inc., 98 Lafayette St., New York, describing and offering free a 14"x20" ready reference wall chart, "Expansion Bolt and Screw Anchor Dimensional Chart." Broadside explains and describes the chart in detail.

Wiring Manual

New 48-page manual on General Electric Q-Floor wiring for under-floor electrical distribution in H. H. Robertson cellular steel Q-Floors may be had from the Construction Materials Division, General Electric Co., Appliance & Merchandise Department, Bridgeport, Conn. The manual includes catalog listings of G.E. Q-Floor wiring accessories and fittings, and detailed data on layout and installation procedure. A 13-page technical data section contains illustrations and complete descriptions of G.E. Q-Floor wiring materials. Layout and installation formations are illustrated with diagrams and photographs. Sample specifications are included.

(Continued on page 104)

NEW PRE-DECORATED SHEETROCK



When the board is on . . the job's done . . by one man. No joint treatment, no nail spotting, no painting

ALREADY DECORATED
KNOTTY PINE
BLEACHED MAHOGANY
WALNUT
GREEN
BUFF
BLUE
IVORY
Seven Finishes—Your choice of factory lacquered green, ivory, buff or blue or wood grain effects in walnut, knotty pine, bleached mahogany. Enameled nails in 7 matching colors.

Saves up to 25%

These are savings reported on actual jobs over other types of wallboard. Two to three weeks' time saved is the record of one F.P.H.A. war housing project. This is due to the fact that with Pre-decorated Sheetrock there is no painting, no joint treatment, no nail spotting necessary.

PLANNED INTERIORS—For balanced wall treatment, the wall and ceiling joints are aligned, producing a pleasing decorative design.

AVAILABLE IN ANY QUANTITY—Pre-decorated Sheetrock is composed of non-critical materials and is readily available.

FIREPROOF—The gypsum rock core of the board is fully fireproof.

War speed, economy, fire protection, sound construction—open the way to new opportunities with this sensational new development by the United States Gypsum Company. Write for latest literature.

USG UNITED STATES GYPSUM
300 West Adams Street • Chicago, Illinois

This famous trademark identifies products of the United States Gypsum Company—where for 40 years research has developed better, safer building materials.

WALLBOARD • INSULATION • ROOFING • PAINT • LATH • PLASTER

(Continued from page 102)

Tanks

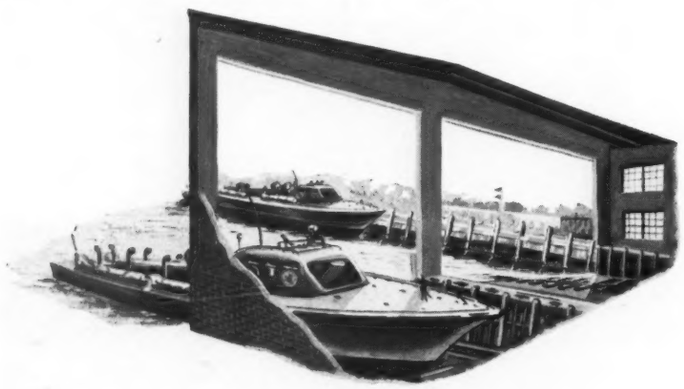
Two-page leaflet, from Carey Associated Industries, 715 Seeley Road, Syracuse, N. Y., on its Victory wood septic tank. Specifications included.

Fire Extinguishers

Two new fire extinguisher charts, from American-LaFrance-Foamite Corp., Elmira, N. Y., show the operating characteristics of first aid hand fire extinguishers and wheeled engines. The charts tabulate the several types of hand extinguishers and wheeled engines, and their suitability as applying to various types of fires, in accordance with Underwriter's Laboratories classification. Recommendations are also included for alcohol and kindred fire hazards. Charts give complete data in condensed form as to extinguisher and engine characteristics, methods of operation, capacity, range of stream, etc.

Pumps

Catalog D2-1042, from Economy Pumps Inc., Hamilton, Ohio, describes in detail the firm's new Type SCV pump for clear liquid service. Construction details, dimensioning and engineering data are included.



You supplied the DOORWAY...

Electric Boat Co. . . . another Peelle installation completed ahead of schedule

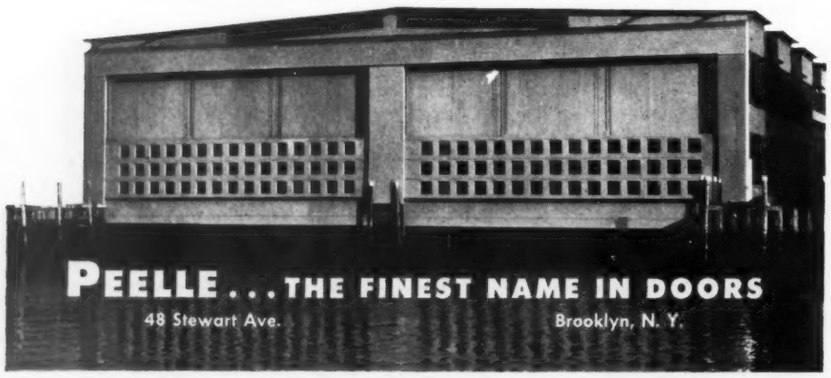
Quickly installed and easily operated, the NEW Peelle Plydoor fits any size opening. Whether it's a Flying Fortress hangar, a mosquito boat nest or a jeep factory, this prefabricated hollow cell door is the perfect answer.

In six months, more than 35 Peelle installations have been made in airplane hangars alone. Bonded plywood, over strong wood framework, makes a sturdy, weatherproof door of maximum strength and minimum weight.

The Peelle Plydoor is stronger per pound than steel, and has a large factor of safety over the 30 pound per sq. ft. wind load specified by engineers So light it can be manually operated in a jiffy . . . glides up out of the way . . . or rolls back like a telescope into a self-contained unit. Can be added easily to buildings already constructed. You supply the doorway . . . Peelle has the door. Prefabricated under a new principle of wood construction and using a minimum of critical materials, the Peelle Plydoor can be delivered almost immediately . . . one week from finished drawings to shipment.

A complete staff of Peelle engineering advisors, backed by nearly a half-century of valuable door construction experience, will be glad to help you solve your door problems. Write for complete specifications and information.

Peelle had the door



PEELLE . . . THE FINEST NAME IN DOORS

48 Stewart Ave. Brooklyn, N. Y.

Paint Manual

New, 16-page booklet, "Architectural Specifications for Painting, Varnishing and Finishing," illustrated with black-and-white photographs and two pages of color chips, covers finishing of exteriors and interiors of private and commercial properties and of structural steel and ornamental metalwork. The manual, which describes Kem-Tone resin emulsion paint, may be had from Sherwin-Williams Co., 101 Prospect Ave. N.W., Cleveland, Ohio.

Boilers

"Dividends From Your Power Plant" is a 48-page booklet which covers the principles governing the economical operation of steam-generating equipment. The booklet discusses subjects such as the dollars-and-cents importance of boiler efficiency the relation between steam costs and profits, natural versus mechanical draft, carbon dioxide and carbon monoxide, excess air, and factors that govern labor costs in the boiler room. The text is pointed up with examples, tables, and sketches. Preferred Utilities Co., Inc., 33 W. 60th St., New York.

Heat Diffusers

Set of four 2-page specification sheets on various types of heat diffusing units for heating and ventilating large enclosures. Specifications, dimensioning data, and descriptions are contained for each unit. Carrier Corp., Syracuse, N. Y.

Linoleum

Catalog No. 200 (A.I.A. File No. 23-J) from Congoleum-Nairn, Inc., Kearny, N. J., pictures in actual color the pattern reproductions of the various types of linoleum available from the firm. About 26 pages are devoted to showing Nairn linoleum in various types of installations. Included in the catalog are installation specifications and drawings showing method of installation for walls, floors, etc.

Unit Heater

High-test, cast iron, grid-type unit heaters are pictured and described in an 8-page catalog, A.I.A. File No. 30-D-11, issued by D. J. Murray Mfg. Co., Wausau, Wis. "Grid" unit heaters are designed to operate with steam or hot water systems, for pressures from 2 to 250 lbs. Catalog shows typical hook-up diagrams, contains engineering and dimensioning data.

Cemesto Board

Detail Sheets S-1, S-2, and S-3, covering the industrial application of Celotex Cemesto Board to steel mill buildings and, by nailing, to lightweight steel frame buildings. The Celotex Corp., 120 S. LaSalle St., Chicago, Ill.

Insulation

28-page catalog on Fir-Tex insulating board which may be used as a building material, a structural sheathing, an insulating base for plaster, and as a decorative interior finish. Illustrations, in color, show typical installations in home, office, and industrial buildings. Fir-Tex Insulating Board Co., Portland, Ore.

(Continued on page 106)

The American Institute of Architects
The Octagon, 1741 New York Avenue
Washington, D. C.

THE STANDARD CONTRACT DOCUMENTS

These contract forms have stood the test of time. They have reduced to a minimum lawsuits and misunderstandings.

They make for good will between the Architect, the Owner, and the Contractor.

They eliminate worry. They reduce office overhead. They safeguard the position of the Architect. They expedite the business of building.

Is there any Architect who has not adopted these forms as his own?

TITLES AND PRICES

Agreement and General Conditions in Cover	$0.50
General Conditions without Agreement	.35
Agreement without General Conditions	.15
Bond of Suretyship	.10
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Agenda for Architects	$0.40
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BOOKS

Handbook of Architectural Practice ..... (Revised 1943 edition now available)	$5.00
Manual of Accounting for Architects	5.00
A System of Architectural Ornament—*Louis H. Sullivan*	15.00
Charleston, S. C. (Vol. I—Octagon Library of Early American Architecture)	20.00
Bertram Grosvenor Goodhue—Architect and Master of Many Arts	30.00

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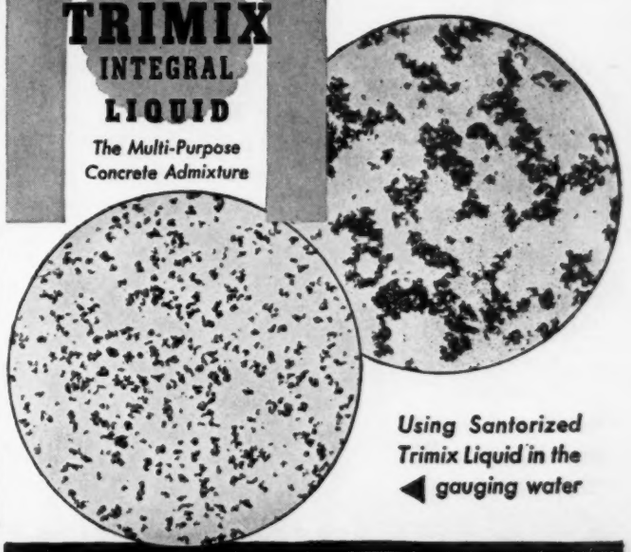
SONNEBORN'S
SANTORIZED
TRIMIX
INTEGRAL
LIQUID
The Multi-Purpose Concrete Admixture

Using plain gauging water ▼



Using Santorized Trimix Liquid in the ◀ *gauging water*

These photomicrographs show the improved dispersion effected by using Santorized Trimix Liquid in Portland Cement mixtures.

These 9 Major Advantages in Concrete Construction Are Yours When You Use SANTORIZED TRIMIX LIQUID

Use Santorized Trimix Liquid and you get greatly improved dispersion of the cement particles in your mix. You get these added advantages:

1. Initial setting time cut materially.
2. Water ratio is reduced.
3. Secures far greater workability.
4. Lowers evaporation rate and secures more thorough curing.
5. Mix is more homogeneous.
6. Both concrete and mortar have greater water impermeability and resistance to erosion.
7. Shortens protection period in cold weather.
8. Gives greater early compressive strength.
9. Permits faster placing, more rapid removal of forms, and greater frequency of form re-use.

Interested construction executives are invited to write Dept. P3 for basic data on the tests which support these claims for Santorized Trimix Liquid.

Where Results Count—Count on Sonneborn

L. SONNEBORN SONS, Inc.
88 Lexington Avenue New York, N. Y.

(Continued from page 104)

Electrical

Bulletin No. 69 (A.I.A. File No. 31-D-3) from Frank Adam Electric Co., Box 357, St. Louis, Mo., contains much valuable information on panelboards and cabinets.

Paint

S. C. Johnson & Son, Inc., Racine, Wisc., has issued a new 12-page catalog on its War-Formula Paints, developed to replace its Wax-Fortified Paints for which certain raw materials are no longer available. The paint has been specially developed for wartime use. Specifications and color card are included.

Timber Structures

First set of supplementary designs for insertion in "Typical Designs of Timber Structures." The 25 new typical designs on timber design information have been developed for ready reference by engineers of Timber Engineering Co., 1319-18th St. N.W., Washington, D. C. The 25 sheets, each 11"x16½", contain general notes, engineering drawings, and a materials list on Fink trusses, Pratt trusses, pitched roof trusses, bowstring trusses, etc. "Typical Designs of Timber Structures" contains a representative group of designs available from Teco. The designs are prepared as guides to architects and engineers in the preparation of their own designs.

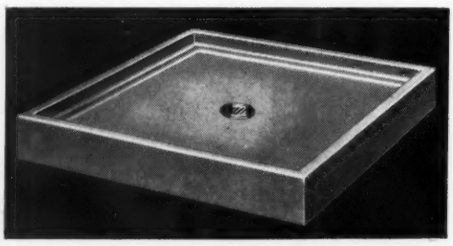
WEISWAY V DELUXE CABINET SHOWERS

Bath Facilities NOW for Remodeling and New Building

Containing less than one pound of critical metals, Weisway V De-Luxe Cabinet Showers are available immediately for privately financed housing, which, in critical areas, rates AA3 priorities. Walls of genuine Masonite, proved by a 9-year submersion test to retain strength and dimensions under severe conditions. Plastex receptor is high pressure molded of chemically blended materials containing no cement... lighter in weight, stronger, more durable. Prompt shipment, through regular plumbing channels. Write now for details and specifications. No obligation, of course.

HENRY WEIS MFG. CO., INC.
EST. 1876
521 OAK ST., ELKHART, IND.

WEISWAY Cabinet Showers



EXCLUSIVE NEW PLASTEX RECEPTOR

Carrier Equipment

A new condensed catalog, twelve pages, listing equipment for temperature and humidity control, refrigeration, heating, and ventilating from Carrier Corp., Syracuse, N. Y. Application, specifications, features, and installation of 16 types of Carrier equipment grouped according to functional characteristics. A feature of the condensed catalog is a listing of 105 uses of Carrier equipment in war production and also a chart that indicates Carrier services to postwar construction.

Mahogany

Fourth edition of "The Mahogany Book," written by George N. Lamb and published by the Mahogany Association, Inc., 75 E. Wacker Drive, Chicago. The 64-page book, 6¾ x 10¼", was originally prepared for the architect, designer, maker of cabinetwork and furniture, and for those who sell and for those who buy. Since mahogany has gone to war, this new edition presents the wood in its latest role. In addition to a discussion of mahogany veneers, plywood, lumber, there is a brief history of four centuries of mahogany in various periods.

Flooring

"Floors That Endure," 12-page catalog from The Tile-Tex Co., Chicago Heights, Ill., describes Tile-Tex resilient flooring. The complete range of plain and marbleized colors is shown in actual color, as are some of the Tile-Tex installations in homes and public buildings.

Vacuum Cleaning

Bulletin Nos. 102-E and 125, both 8 pages, from Spencer Turbine Co., Hartford, Conn., discuss industrial vacuum cleaners available in both heavy duty portable and stationary types. Engineering data and specifications are given on cleaners ranging from ¾ to 7½ h.p., and from 1½ to 7½ cubic foot dirt capacity.

Door Maintenance

Four-page leaflet, Folder D-62, from Dahlstrom Metallic Door Co., Jamestown, N. Y.—"Maintenance Bulletin for Elevator Entrances." The bulletin covers essential points relating to the everyday use and operation of doors, and the care of finished surfaces.

Pencils

Booklet No. 8, 3½"x5½", from Koh-I-Noor Pencil Co., Inc., 373 Fourth Ave., New York, lists the various Koh-I-Noor drawing materials for architects, engineers, draftsmen.

Wrought Iron

Technical bulletin, 36 pages, "Wrought Iron for Underground Services," from A. M. Byers Co., Engineering Service Department, Pittsburgh, Pa., designed to be of service to water works engineers, heating men, plant maintenance men, others. The booklet discusses the factor affecting soil corrosion of underground piping, outlines installation histories of water wells, lawn sprinkler piping, oil and gas wells and lines, gasoline lines and tanks, and electrical cable conduit.

(Continued on page 108)

WIRING DEVICES
1890 H&H 1943
MOTOR CONTROLS

SYMBOL OF QUALITY
IN WIRING DEVICES AND
CONTROL APPARATUS
for 53 years

Available now for dependable control of light, heat and power if ordered with proper priorities . . . Send for current Catalogs for war service installations.

HART & HEGEMAN DIVISION
ARROW-HART & HEGEMAN ELECTRIC COMPANY, HARTFORD, CONN.

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"DOUGH"
WORKS IN
WARTIME!

For altering rough charcoal "quickies," for picking out lines, tones and highlights; for cleaning and the hundred-and-one other erasing odd jobs for which a "kneadable" dough rubber is an absolute MUST, Weldon Roberts Eraser No. 666 Dough will serve you well. In spite of wartime rubber restrictions, Dough will work efficiently. Be sure you have one. Two sizes, No. 666 medium, No. 667 large. At your stationer or art supply shop.

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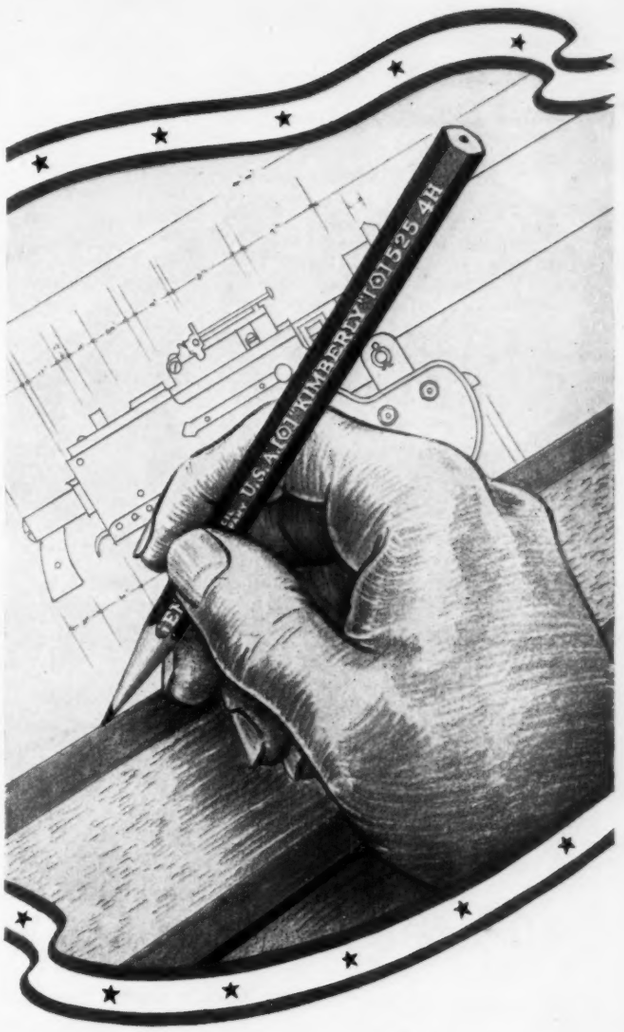
Weldon Roberts Erasers
Correct Mistakes in Any Language



The HAND in front of the man behind the man behind the gun, uses—

GENERAL Carbo-weld
KIM-BER-LY
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Many engineers and draftsmen prefer Kim-ber-ly Drawing Pencils because of their accurate grading and Carbo-weld strength. If you have not used Kim-ber-lys, try them.

You have 17 degrees from which to select, (6B to 9H). Write Dept. A., sending us your name and address, with that of your supply dealer, for a free trial pencil.

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Makers of Fine Pencils since 1889

General Pencil Company
JERSEY CITY NEW JERSEY

(Continued from page 106)

Ventilators

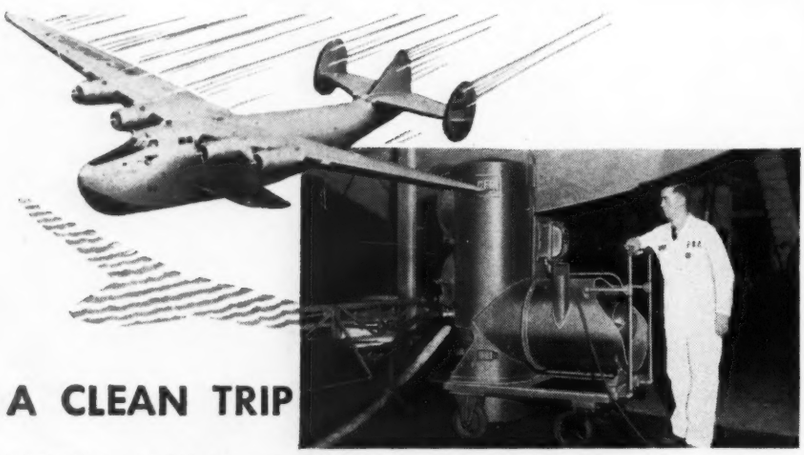
Construction details, with engineering data and tables, on the new Asbo roof ventilator made of asbestos-protected metal sheets. Twelve pages. American Steel Band Co., Pittsburgh, Pa.

Plumbing

Wall chart, 16¾″x24½″, from Eljer Co., Ford City, Pa., shows the many Eljer vitreous china plumbing fixtures available for war housing, industrial plants, army cantonments. Illustrated are urinals, slop sinks, pedestal- and wall-type wash bowls, laundry trays, etc.

Furnaces

Literature available from Spencer Heater Division, Williamsport, Pa., includes Catalog No. 40-3, four pages, on heavy duty, cast iron tank heaters; 4-page catalog on the automatic magazine feed Spencer steel furnace; Catalog No. 40-1, eight pages, on steel tubular boilers for use in multiple-family structures, commercial and industrial buildings, schools, etc.; Catalog No. 42, eight pages, heaters for steam, vapor, or hot water heat and all-year domestic hot water; and a general catalog on steel furnaces for every type of fuel, for heat and hot water. All catalogs contain specifications, engineering data, dimensioning data.



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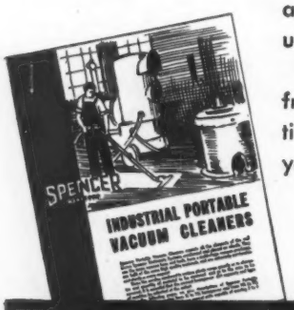
Few people realize the extent of reconditioning between trips of huge ocean clippers. Every Pan American clipper starts out spotlessly clean. Spencer 5 HP Portable Vacuum Cleaners with long hose lines reach every spot, not only the floors, rugs, and furniture, but all the machinery.

Most of the big airplane manufacturers also use Spencer Vacuum. Babbitt is picked out of engine heads, stray bolts, nuts, etc., removed from wings and fuselages, bench cleaning is speeded, and the finished job is cleaned before delivery. It is ideal also for the manufacture of the many instruments used in all forms of modern transportation.

Spencer Vacuum for industrial service ranges from ¾ to 100 horse power, portable and stationary. There's a Spencer representative near you. Ask for the Spencer Bulletins.



THE SPENCER TURBINE COMPANY
HARTFORD, CONN.

243 A

SPENCER HARTFORD VACUUM CLEANING

THE SPENCER TURBINE COMPANY, HARTFORD, CONN.

Gratings

New 8-page catalog illustrating gratings and safety steps. Technical information included assists the draftsmen in detailing and designing. Borden Metal Products Co., Box 172, Elizabeth, N. J.

Roofing and Siding

New catalog on Felt-Cote, an asbestos-protected metal material used for roofs and siding on industrial buildings of all types. Applications, specifications included. American Steel Band Co., Felt-Cote Division, Pittsburgh, Pa. Also available: 21″x24″ sheet showing details which are standard for most conditions likely to be encountered in the use of Felt-Cote. The designer may save time by placing this diagram under his tracing sheet and reproducing such details as are applicable.

Laboratory Equipment

Bulletin 498, 12 pages, from United States Stoneware Co., 60 E. 42nd St., New York, on corrosion-resistant equipment for laboratories, including sinks, troughs, ventilating equipment, and acid-proof pipe fittings, traps, etc. Specifications and dimensioning data are included.

Plywood

16-page catalog, "Weldwood—The Modern Material of Infinite Application," from United States Plywood Corp., 616 W. 46th St., New York, discusses the versatility of this material. Included: thumbnail description of plywood manufacture. Scores of applications are described and illustrated, ranging from templates to aquaria, from boat hulls to dinettes.

Paint

Vol. 4, No. 1 (A.I.A. File No. 25) of "Paint Progress," contains two stories on the conservation of steel through paint protection. The issue also contains a timely article for industrial plant executives who are interested in obtaining increased illumination at a small first cost. The article discusses the extent to which plant lighting can be improved by utilizing the floor (when painted in white or light colored paint) as a light reflector. The many ways in which paint is serving the war effort are evident from these and other articles in this issue. New Jersey Zinc Co., 160 Front St., New York.

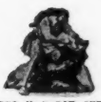
Windows

Sixteen-page catalog, A.I.A. File No. 16-E, from E. K. Geyser & Co., 200 Cedarhurst St., Pittsburgh, Pa., on bar window construction. Units were originally produced in aluminum and steel, and now are made in wood only. Construction details, specifications, installation photographs are included.

Shower Cabinets

The Bathe-Rite shower cabinet, designed to meet the needs of low-cost bathing facilities in wartime building projects, is illustrated and described in a 4-page folder available from Milwaukee Stamping Co., 851 S. 72nd St., Milwaukee, Wisc. Cabinet walls are made of treated fibre board.

(Continued on page 110)



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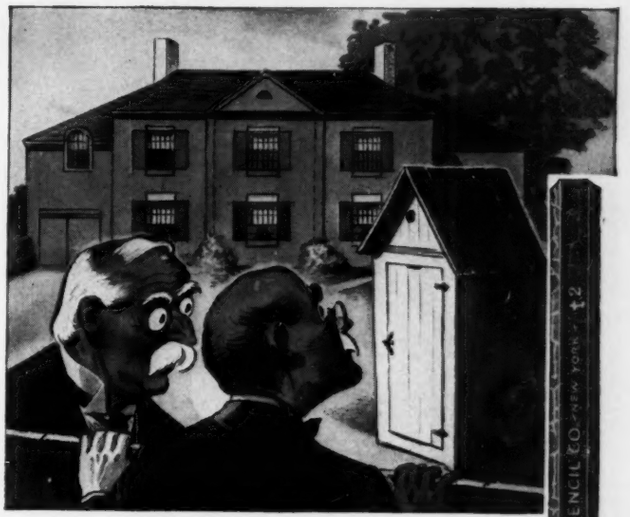

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(Continued from page 108)

Wood Sash.

4-page folder on projected wood sash contains four 18″ x 24″ sheets with full-size sill, jamb, and head details of the sash installation in frame, masonry, and poured concrete construction. One sheet contains full-size details of the new awning-type window. This unit is similar in design and operation to that of the projected sash except that muntin bars are lighter, and units are made to sizes which make it possible to use the same size glass as is commonly used in double-hung windows. Rolscreen Co., Pella, Iowa.

Paint.

Wax-Fortified (impregnated with protective wax) paints and enamels for industrial and commercial use are described in a 12-page catalog issued by S. C. Johnson & Son, Inc., Racine, Wisc. Specifications, price lists, color charts included.

Lighting.

Booklet 2130 from Curtis Lighting, Inc., 6135 W. 65th St., Chicago, presents types of products which find most frequent use in industrial plants producing war goods. Included are data on fluorescent industrial lighting units and units for the industrial office and drafting room.

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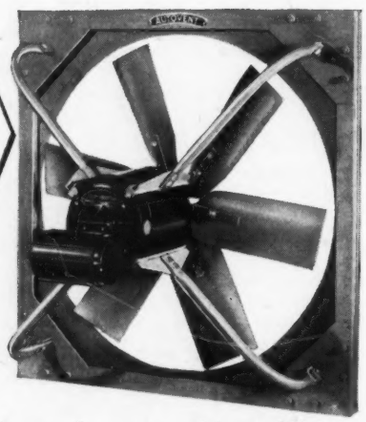

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GOVERNMENT PUBLICATIONS

Wood.

Partial list of Government publications of interest to architects, builders, engineers, and retail lumbermen; June 1942. (1)+18 p. 4°. Processed. A 13.27/7: Ar 2/942. From Forest Products Laboratory, Madison, Wis., free.

Preservatives.

Wood preservatives (with list of references). Revised Feb. 1942 (1)+12 p. 4°. Processed. A 13.27/2:P 197/4. From Forest Products Laboratory, Madison, Wis., free.

Population.

Housing and population statistics for census tracts: Atlanta, Ga., and adjacent area. 1942. v+63 p. il. 4°. (16th census of United States, 1940.) (Prepared under supervision of Leon E. Truesdell, Chief statistician for population.) Paper. C. 3.940-38: G 29/5. Superintendent of Documents, Washington, 20c.

Sand and Gravel.

By Oliver Bowles and G. E. Tucker. 1942. (2)+19 p. il. Preprint from Minerals Yearbook, 1941. Paper. I 28.37/a: Sa 56/941. From Superintendent of Documents, Washington, 5c.

MANUFACTURERS' DATA WANTED

SGT. R. B. BOWSER, Works & Building Section, R.C.A.F., 341 Assiniboine Ave., Winnipeg, Man., Canada. (Manufacturers' literature on structural design, planning, mechanical equipment, construction details.)

INTERNATIONAL MINERALS & CHEMICAL CORP., Engineering Department, 20 N. Wacker Drive, Chicago. (Data and catalogs for complete A.I.A. file.)

GEORGE NAROVEC, Architect, Engineering Section, Office of Division Engineer, Edmonton, Alberta, Canada. (Architectural, engineering, and building material catalogs and data for architectural and engineering files.)

BERNHARD ROGGE, Industrial Designer, 6506 Maplewood Road, Baltimore, Md. (Catalogs and data for A.I.A. and engigeering files.)

MAYO LARKIN, Industrial Designer, 1713 Commonwealth Ave., Boston, Mass. (Literature and data for A.I.A. file, manufacturers' catalogs, and samples.)

MANUEL SALAZAR Y ARCE, Architect and Engineer (National Railways of Mexico) Ave. Garrido, 15, Guadalupe Hidalgo, Mexico, D.F. (Data for A.I.A. file.)

PERSONALS

A. EUGENE CELLAR, Architect, formerly in the Bisbee Bldg., has moved to new offices at 808 Graham Building, Jacksonville, Fla. Advertisers are asked to correct their mailing lists.